JOURNAL
OF THE
INDIAN MEDICAL ASSOCIATION
(Formerly "THE INDIAN MEDICAL WORLD")

Vol. I] *Calcutta : January, 1932.* [No. 5

New Operation and Observations on Inguinal Hernia.

By DR. G. V. DESHMUKH M. D. (Lond.) F.R.C.S. (Eng.) L. M. & S., Bombay.

In the formation of hernia the posterior wall of the inguinal canal has too much attention concentrated on it. The anterior wall and the floor of the inguinal canal, have not had the attention they deserve. The anterior wall is formed by the aponeurosis of the external oblique chiefly, and the floor is formed by the Poupart's ligament. Both these structures are not fixed but are freely movable. If on the operation table, after dividing the external oblique, a finger is introduced beneath the Poupart's ligament and the patient is asked to cough, it will be found that when the lower abdominal wall bulges the Poupart's ligament becomes tense, and moves upwards and inwards towards the middle line. While introducing sutures in hernia the Poupart's ligament can be pulled up to more than an inch.

Besides this mobility, the shape of the Poupart's ligament is also important. It is concave towards the abdominal side and convex on the outer side, on account of the attachment of the fascia lata of the thigh.

The Poupart's ligament is peculiar to man on account of his erect posture, wide pelvis, and method of progression in the soles of his feet (SIR ARTHUR KEITH). With the width of the pubic arch and pelvis, the Poupart's ligaments are carried outwards leaving a weak spot in the region of the internal abdominal ring where an oblique inguinal hernia is liable to develop. Man suffers from the disadvantage of developing a hernia for the advantages he has gained.

HOW IS THE HERNIA ORDINARILY PREVENTED ? Hernia ordinarily is prevented by the efficient sphincter action of the muscles in the inguinal canal. The lower margin of the internal oblique and the transversalis, which form the roof of the inguinal canal, come down like a shutter. The Poupart's ligament, which forms the floor, moves upwards and inwards ; and thus by the approximation of the floor and the roof, the inguinal canal is efficiently closed. How efficient this action is may be realised from the statistics that 50 per cent of the male children are born with patent vaginal process, and yet the incidence of hernia to general population is estimated to be only 1 to 15 or 20. By the age of 4 months more than 60 per cent of these are obliterated. I attribute the obliteration of the vaginal process to the pressure exerted by the floor and roof of the inguinal canal. Pressure of the truss in infants occasionally leads to a cure. This also points to pressure being responsible for the obliteration of the vaginal process.

IMPORTANCE OF THE APONEUROSIS OF THE EXTERNAL OBLIQUE : The aponeurosis forms the anterior wall of the canal throughout its entire length. As soon as a hernia escapes through the external abdominal ring it progresses more rapidly. By damaging the ring and the aponeurosis, recruits in Russia were in the habit of escaping the military service. Anatomically, the aponeurosis

anteriorly is continuous with the sheath of the rectus; below it is inserted into the Poupart's ligament; but in the triangular interval between the Poupart's ligament below and the lower margin of the internal oblique and transversalis above, it is exposed to the effects of the intra-abdominal pressure. When it is relaxed in conditions of weakness of the abdominal wall, or in abdomens congenitally prone to develop inguinal hernia, this region is occupied by an oval swelling, having the boundaries described above. (Figure III). In following the development and progress of the acquired hernia, it enlarges at the expense of the lower and outer side. The relaxed aponeurosis gives way and bulges on the side of the Poupart's ligament. (Figures II and III). I regard this slack in the aponeurosis of the external oblique as the chief factor in the etiology of acquired hernia.

The theory of preformed sacs (RUSSELL) explains the causation of congenital hernias in infants and children but do not explain adequately the formation of acquired hernias in adults. It fails to explain direct hernias and femoral hernias. The theory seems also to have been left half way by not explaining why some sacs persist and others get obliterated. I have tried to explain it by insufficient pressure of the floor and roof of the inguinal canal. This may be due to a congenital defect, such as an increased relative distance of the Poupart's ligament from the internal ring, leading to weak sphincter action producing the persistence of vaginal process and congenital hernia; or increased curvature of the Poupart's ligament on account of its attachment to the strong fascia lata of the thigh. Hernias have been known to run in families. I myself have operated on 3 brothers. All statistics show the preponderance of the inguinal hernia on the right side. In my cases, at the King Edward Memorial Hospital, Bombay, out of 129, 78 or 60 per cent were on the right side and 41 or 31·5 per cent were on the left side only 10 or 8·5 per cent being bilateral. This preponderance of the right side has been noticed in all statistics and may be explained by the stronger pull of the fascia lata on the right side in the average right-handed person, producing an increased curvature of the Poupart's ligament on the abdominal side, leading to weaker sphincter action in the inguinal canal on the right side.

The method which I am going to describe was forced on me 10 years ago. From 1913 to 1921 I was a follower of Bassini method. In 1921 I had an occasion to operate on a motor driver, aged 28, under local anaesthesia for a bubonocele. The local anaesthesia was not satisfactory and by the time I opened the inguinal canal by splitting the external oblique aponeurosis and was isolating the sac, the subject became nervous, started howling, and would not let me proceed. I, therefore, pushed up the sac as best as I could behind the abdominal wall under the abdominal muscles, and sutured up the divided margin of the external oblique aponeurosis to the Poupart's ligament, overlapping the suture line with the lower flap. I trusted to operate on the subject at a future date and do the regular Bassini method. The chauffeur refused to undergo operation any more and started driving the car and do all the mechanical work in about 3 months time in spite of my warning. I have watched this driver for the last 10 years without any recurrence.

In 1923, I had to operate on a clerk aged 75 for strangulated hernia. After reduction and division of the sac I repaired the inguinal canal in the same way, to save time, by mere suturing of the external oblique aponeurosis to the Poupart's ligament in front of the cord, and overlapping the external oblique aponeurosis. I followed the case for 4 years till the time of his death and there was no recurrence.

Soon after I followed the same method, with success in a case of recurrent hernia referred to me. I believe the method works by removing the slack in the external oblique aponeurosis and carrying the Poupart's ligament upwards and inwards over the inguinal canal.

DETAILS OF THE METHOD: I make a curved

Fig. I.

Fig. II.

When the patient is breathing normally.

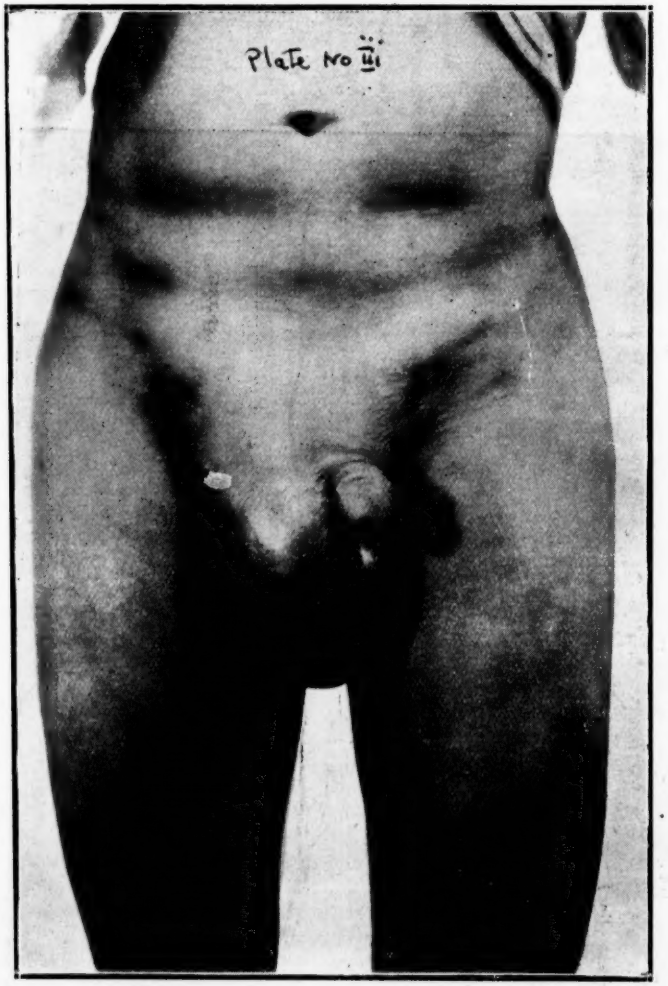

Fig. III.

Same patient as in Fig. II when he is straining.

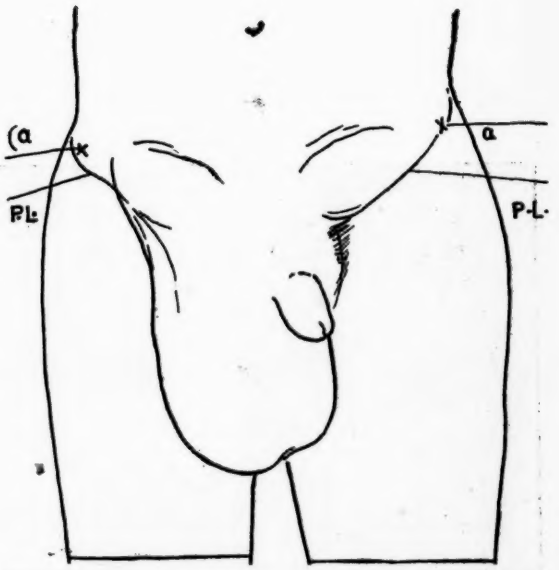

Fig. IV.

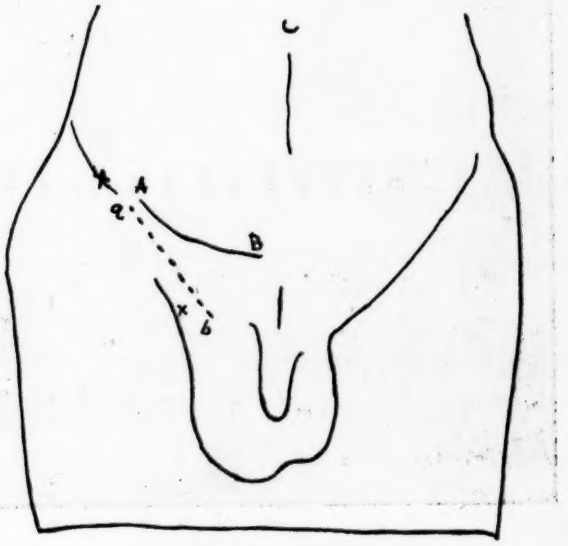

Fig. V.

A...B Skin incision as recommended.
a...b The usual skin incision.

horizontal skin inscision running from a point 2″ inches below the anterior spine and ½″ inch above Poupart's ligament to a point, a finger's breadth above the symphisis pubis (Figures I & V). The external oblique aponeurosis is exposed. The lower flap of the skin incision is retracted to the level of Poupart's ligament exposing the anterior wall of the inguinal canal.

The external oblique aponeurosis is incised in an oblique direction above the level of the internal and external abdominal rings. The pillars of the external abdominal ring are left intact. On the outer side the incision extends one inch outside the internal abdominal ring. The sloping fibres of the external oblique are divided and not split. The incision in the external oblique aponeurosis usually runs parallel to the inter-columnar fibres (Figure VI).

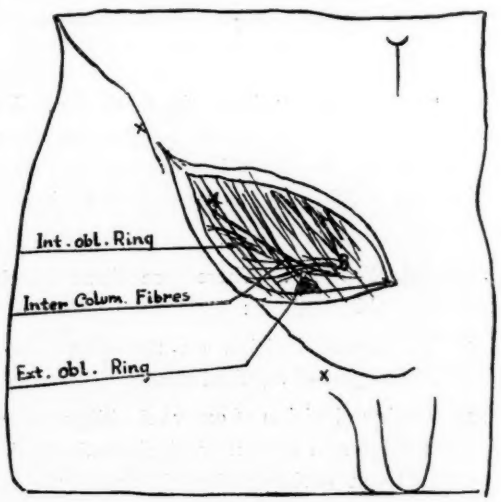

Fig. VI.
A...B Incision in the external oblique aponeurosis.

This roughly leaves a lower triangular flap of external oblique aponeurosis connected with Poupart's ligament. I retract this flap and separate the fibres of the internal oblique and cremaster from the deep aspect of this flap and Poupart's ligament is wiped clean of any muscular fibres. I find the index finger of the gloved right hand very serviceable for this purpose. Then starting from the pubic spine on the deep aspect of Poupart's ligament I retract the cremaster and lower fibres of the internal oblique towards the internal ring with the index finger. I prefer the index finger to gauze for this manoeuvre.

In this way the sac can be easily isolated without damaging the cremaster muscle. Occasionally the lower fibres of the internal oblique are adherent to the upper side of the sac, when I use gauze dissection to separate the sac from these fibres; but on the anterior and lower aspect the sac is usually separated by manoeuvring with the index finger as stated above.

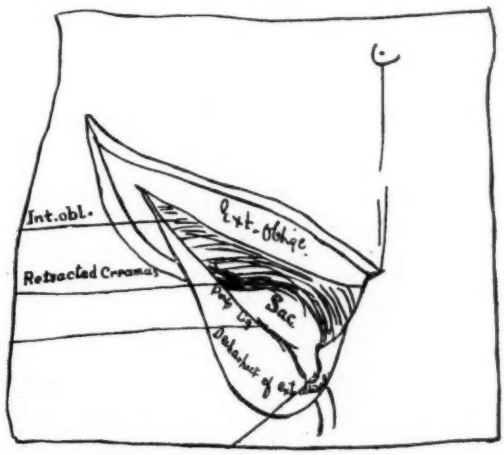

Fig. VII.
Exposure of the contents of the Inguinal Canal.

I now gently pull on the sac. The vas deferens and the spermatic vessels are found on the posterior aspect of the sac, enveloped in a thin layer of infundibuliform fascia. Gently lifting the sac I make a longitudinal incision on its lateral and lower aspect dividing this thin layer of fascia without opening the sac. By gauze dissection the vas and vessels of the cord can be separated from the posterior aspect of the cord and pushed down towards the posterior wall of the inguinal canal.

If the sac is empty, it is isolated well above the internal abdominal ring, opened, clamped between two forceps and divided. The upper end is transfixed with silk, the ligature tied

leaving the two ends long. These two ends are brought out through the muscles of the abdominal wall, one inch outside and above the internal abdominal ring, and ½" apart (to dislocate the peritoneum above the neck of the sac), and tied over the external oblique muscle. (Figure VIII).

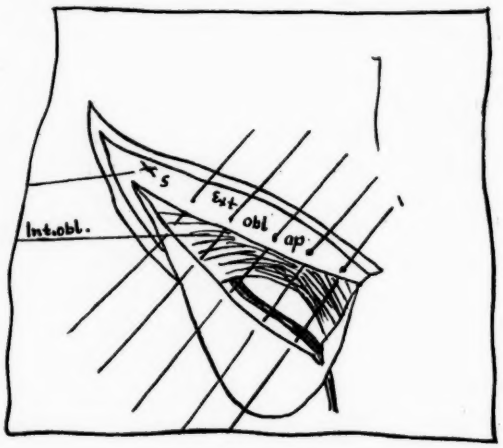

Fig. VIII.

S Ligature tying the sac tied above over the Ext. oblique suture of Poupart's ligament to lower margin of the Ext. oblique

The lower part of the sac is without exception removed. In cases of congenital hernia, part of the lower portion is sutured to form the tunica vaginalis. When the sac is not empty it is opened, the contents of the sac treated on the usual lines, reduced and the sac treated as above.

The lower margin of the upper flap of the external oblique aponeurosis sutured to Poupart's ligament in front to the cord, (Figure VIII), by four to six sutures without including any fibres of the internal oblique, transversalis or conjoined tendon. The first suture starts at the inner angle. It passes through the insertion of Poupart's ligament on its deep aspect, and the lower margin of the external oblique aponeurosis over the conjoined tendon near the rectus sheath. (Figure VIII).

The lower flap of the external oblique aponeurosis is brought up to overlap this suture line and sutured to the aponeurosis of the external oblique and the skin wound closed without drain. (Figure IX).

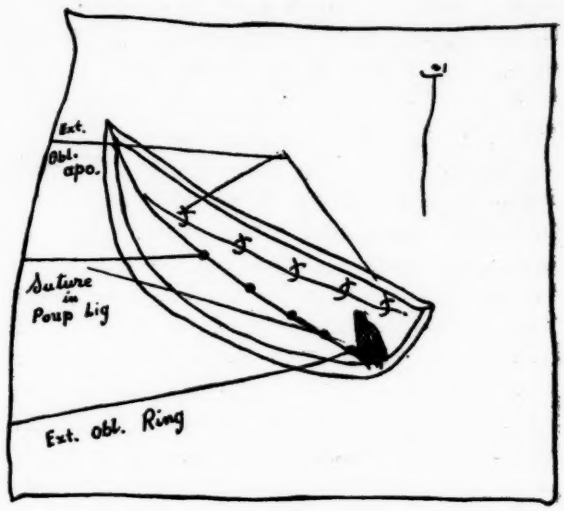

Fig. IX.

Sutures are removed on the tenth day. The patient is allowed to go out of hospital on about the 18th day. No truss is worn but the patient is asked not to do any heavy work for about 3 months.

SPECIAL POINTS : There are three special points about this method :

(1) Horizontal incision on the skin above the region of inguinal canal.

(2) Oblique incision of external oblique above the internal and external abdominal ring without dividing the pillars of the external abdominal ring.

(3) Suture of the Poupart's ligament to external oblique aponeurosis only.

At the King Edward Hospital, I have given this method of suture a thorough trial in the 129 cases till the end of 1930 in the hospital class of patients, without any recurrence so far. Of the 129 cases, 6 cases were below the age of 10.
19 cases were above the age of 50.
12 cases were of the direct variety.
18 cases were strangulated hernias.

They were all operated under spinal anaesthesia with stovaine or under local anaesthesia.

COMPARISON WITH OTHER METHODS: (1) To mention briefly the important steps in the established methods of operating on hernia. These vary only in the repair of the inguinal canal.

Bassini's Method: The pioneer method in opening the inguinal canal. Sutures the conjoined tendon and lower margin of internal oblique to Poupart's ligament behind the cord. The cord is transposed. The internal oblique, transversalis and occasionally rectus or its sheath sutured to Poupart's ligament in front of the cord. Cremaster and external oblique is overlapped.

Kocher's Method: The inguinal canal is not very much disturbed. The sac is removed by invagination extra-peritoneally or intraperitoneally and transfixation The inguinal canal is strengthened by bracing the aponeurosis of external oblique and the pillars of the external abdominal ring by sutures.

Wyly Andrew's Method: Aponeurosis of the external oblique and the lower margin of muscles is sutured to Poupart's ligament behind the cord. External oblique aponeurosis overlapped. The cord is transposed and runs in a tunnel between the two layers of external oblique. I find the transposition of the cord and the suture of the muscles to Poupart's ligament, unnecessary and against the normal anatomy of the inguinal canal.

SPECIAL POINTS IN DETAIL. I. *The Skin Incision follows the fold usually present in this region.* This fold is more marked in women and fat persons but is present in all patients. Besides the comfort in dressings, distance from a skin area which is difficult to keep clean and aseptic, the cosmetic advantage of the incision are too obvious to need any comment. The scar gets completely hidden in the fold of the skin and is difficult to see unless the edges are retracted. Only one set of vessels, the superficial epigastric is divided ; the normal aponeurosis of external oblique is reached above the inguinal canal, and is easily recognised in this situation by the glistening appearance and direction of the fibres in all cases, young or old, direct or indirect, recurrent or strangulated.

II. *Easy Approach*: The approach from above and the recognition of this first land mark is a great advantage in operating in all cases. A young operator will find this approach from above of particular value. The scar produced by the old oblique incision is very liable to stretch and is in a position pressed by the pad of the truss. Should the hernia recur the high position of the scar away from the site of pressure would be an advantage.

III. *Incision in the aponeurosis of external oblique*: When the fibres of the external oblique aponeurosis over the inguinal canal are split separating the pillars of the external abdominal ring, it is very difficult to repair it accurately. Besides, in splitting the important inter-columnar fibres are necessarily divided. I, therefore, prefer to divide the aponeurosis above the external ring and leave the pillars intact. (In strangulated hernia only the external ring is divided by an oblique incision in the aponeurosis running from the inner end of the transverse incision in the aponeurosis).

The aponeurosis of the external oblique in this situation will be found to consist of a regular net-work of the fibres lying on the deep aspect of the superficial fibres. I believe division leads to a better union with Poupart's ligament than splitting.

The high division of the aponeurosis is necessary for the efficient overlapping and for the removal of the slack in the aponeurosis over the inguinal canal.

USELESSNESS OF THE SUTURE OE MUSCLES TO POUPART'S LIGAMENT: The suture of the lower margin of internal oblique and conjoined tendon to Poupart's ligament as in other methods is deliberately excluded. Operative experience in cases of recurrent hernia, and experimental work on the union of tissues and sutures show the uselessness of this step. Sutures do not hold together

living structures for more than a few weeks. (Sir W. MACWEN). The line of action of these muscles is not the same as the line of suture and it is doubtful if they ever unite with Poupart's ligament. The lower margin of the muscles is usually thin and weak. The suture interferes with the spincter action of the muscles in the inguinal canal and substitutes in the place of an active contracting muscle, fibrous tissue which can yield and bulge.

Majority of males do not develop hernia inspite of the absence of muscular tissues over a part of the posterior wall. The presence of muscle in the posterior wall of the canal does not necessarily prevent a hernia against the increasing abdominal pressure, as is seen by the occurrence of direct hernia in the region of conjoined tendon. The position of muscles is of less importance than the strength and action of the muscles in the inguinal canal. Suture to Poupart's ligament destroys the action of the muscle and replaces the muscle by fibrous tissue. It is therefore better to suture the aponeurosis directly to Poupart's ligament, leaving the muscles alone to regain their strength and action.

Whereas on experimental grounds and experience in recurrent hernias, suture of the muscles to Poupart's ligament is useless, the pulling upwards and inwards of Poupart's ligament by sutures to the firm aponeurosis is of the highest importance. It is the natural insertion of the aponeurosis. It moves in that direction in coughing and other straining efforts. The slack in the external oblique aponeurosis can only be removed by high division of the aponeurosis and broad overlapping which also helps the union of the two flaps of the aponeurosis. (GALLIE AND LE MESURIER). Suturing of Poupart's ligament to the tough and fixed aponeurosis, carries it upwards and inwards, so that it practically covers the internal abdominal ring and the inguinal canal. I think this is the most important step in the radical cure of inguinal hernia.

Ocular Lesions in Tuberculosis

By DR. S. K. MUKERJI, F. R. C. S. (Edin). D. O. (Oxon), D. O. M. S. (Lond.).
Hony. Ophthalmic Surgeon, Calcutta Medical College Eye Hospital and Carmichael Medical College Hospital.

Tuberculosis of the eye is a relatively frequent disease, though the general practitioners must have been struck by the comparative rarity of tuberculous lesions of the eye, either in general or in pulmonary tuberculosis or in serious cases of surgical affections of the disease, yet if some of these cases are followed up there is good evidence that in after years other manifestations may frequently be present. The eye-patients do not as a rule present any of the active symptoms that go with the popular conception of tuberculosis and cases of eye affections are quite different from the pulmonary cases seen in the medical clinic.

The eye becomes infected in tuberculosis either directly or more generally indirectly and the infection is either exogenous or endogenous. A direct infection takes place in certain forms of conjunctival and corneal affections as are extension from the face and nasal mucous membrane, or of the neighbouring bony structures. In the majority of cases the infection, however, is indirect. There seems to be a very important difference between the severe spreading invasions of the eye leading to more or less complete destruction of the eye-ball and the more chronic and benign forms of tuberculous infiltrations. In the former typical giant cells are common and the tubercle bacilli are frequently found. In the latter careful search and even inoculation tests fail to demonstrate the bacillus. It is agreed that in this latter

group the infection is due to a tuberculo-toxin acting on a specially prepared area, and this view has been supported by experimental evidences.

ETIOLOGY—The predisposing causes may conveniently be divided into 3 sets of influences :

(I) Those which predispose the individual to tuberculosis ; thus there is frequently a history of tuberculosis in the family or a suspicious family history. It may imply a want of resisting power to the increased risk of exposure to this infection.

(II) The predisposition to the location of the disease in the eye—(*a*) of all periods of life childhood is by far the most liable, (*b*) sex has no influence on the etiology, (*c*) injury sometimes favours predisposition and (*d*) if one eye is affected first, the other eye is liable to be involved also.

(III) Those which predispose certain parts of the eye to be the starting point of affection. The tubercle bacillus carried by the blood stream is arrested where the anastomosis of the vessels occur. Hence it is not surprising to find that in tuberculosis of the iris, the characteristic nodules appear first near the pupillary or ciliary regions.

The frequency of ocular tuberculosis though suggested by IRICHAEL long ago was not confirmed until after the general employment of tuberculin for diagnosis was established and some experimental work was done. Every chronic eye-trouble is suspicious and if other causes can be excluded the possibility of tuberculosis must be borne in mind.

FORMS OF OCULAR TUBERCULOSIS. *Eye-lid*—Primary affection is rare, though secondarily it may be affected in (*a*) Lupus as an extension from the face or nose. (*b*) Chalazions were sometimes supposed to be of tuberculous nature due to the presence of giant-celled infiltration but the idea has been given up entirely now. (*c*) The tarsal cartilage is sometimes also involved in the form of tarsitis. (*d*) Ulcerations, specially spontaneous ulcers, are generally tuberculous and they are of irregular shape with red borders which take a long continued course and ultimately in the late stage become puckered with a disfiguring scar near about the eye and in the face.

Conjunctiva—Tuberculosis of the conjunctiva usually affects the palpebral portions and extends gradually to the retro-tarsal folds. The diseased part presents a peculiar discolouration in addition to marked congestion. It is usually primary and follows direct infection. The conjunctiva is transformed into granulation tissue which may ulcerate and be covered with a grey membrane. The parts surrounding the ulceration present irregular hypertrophied nodules. The different forms can be anything from a fine follicle formation to extreme granulosis resembling trachoma. Sometimes ulcerations form which progress slowly and show no disposition to heal. The disease gradually spreads to the ocular conjunctiva and also over the cornea producing pannus. The early involvement of the pre-auricular gland is characteristic of this affection and this is so constant a symptom that it is recognised as one of the diagnostic points in the differential diagnosis from trachoma and other forms of granulosis of the conjunctiva. The diagnosis is sometimes so difficult that bits of tissue are removed and examined for T. B. by ordinary methods or else by inoculating them into the eyes of rabbits. It generally affects one eye. There is not much pain but a little swelling of the eye-lid.

SATLER has described four principal forms of the affection of the conjunctiva :

(1) That which resembles the usual tuberculosis of the mucous membranes in other parts of the body.

(2) There are numerous small grayish nodules like trachoma with very little tendency to necrosis and caseation.

(3) The proliferation in the palpebral conjunctiva is more marked with pronounced mucopurulent discharge. The surface looks like a mass of exuberant granulations.

(4) Lupus of the conjunctiva.

Phlyctenulosis is recognised by some as a tuberculous manifestation though it is definitely

recognised now that by themselves they are not tuberculous and they have been found in patients who show no clinical signs of T. B. affection or any reaction to Tuberculin. The relation between tuberculous conjunctivitis and phlyctenular conjunctivitis is yet controversial because phlyctenules when recent are sterile, contain no pyogenic germs or T. B. Inoculation from them does not produce tuberculosis. Hence it is assumed they are referable to ectogenous infection and to be regarded very little in the light of tuberculous nodules. Again in many cases affected with phlyctenules there are changes which if not tuberculous, most frequently appear under the form of scrofulous lesions of the glands with enlarged tonsils etc. and not infrequently develop pulmonary tuberculosis in later life. Sometimes they occur in patients suffering from pulmonary tuberculosis themselves. If then phlyctenulosis and tuberculosis are separate affections, the percentage of phlyctenules in tuberculous patients are so great that we should not be far out in explaining them as being due to the action of toxic substances in the same way as nodules develop on tuberculous patients after rubbing tuberculin. Some say that the development of phlyctenules in tuberculous patients is an example of anaphylaxis but we have found out as a result of treatment that phlyctenules have got many other contributary factors.

Cornea—Apart from its affection as a part of conjunctivitis (pannus) primary tuberculous keratitis is the result of injury. It is a direct infection and is followed by ulceration with large amount of infiltration of the proper substance of the cornea. Secondary infection from the conjunctiva, ciliary body and iris is equally uncommon. But we do get a type of parenchymatous affection to some extent simulating the interstitial keratitis of inherited syphilis. In the tuberculous form the surface is more irregular, the patches of opacity are less regular in distribution and the vascularisation is more superficial. There are deposits on the posterior surface of the cornea. The onset is not so rapid and the progress is much more erratic. In inherited syphilis it is usual to find the keratitis steadily and progressively advancing followed by a steady and progressive resolution. A small proportion of interstitial keratitis is due only to tuberculosis though the possibility of mixed infection must always be borne in mind.

Typical forms of keratitis are specially suggestive of a tuberculous origin. The opacities are not diffused but spotted rather sub-ephithelial and a tuberculous irido-cyclitis is often accompanied with circumscribed opacities in the cornea associated with good deal of mutton fat K. P. S.

Sclera—Affection of the sclera is generally secondary to the affection of the uvea. It is seldom primary. Clinically it is seen as subconjunctival nodes which lie generally at the limbus, occasionally they are found on the sclera. Associated with this condition there is frequently an affection of the cornea known as sclerosing keratitis which leave tongue-shaped opacities in the cornea. Scleritis was formerly regarded as always rheumatic but now the pendulum tends to the other side and all cases are regarded as tuberculous or syphilitic. There are, however, unquestionable cases of episcleritis or scleritis which are not tuberculous but are toxic in origin due to metabolic disorders. Curiously enough this is common in females who are fat and well nourished and who presumably appear in sound health. The diagnosis in these cases is confirmed by tuberculin tests.

Uvea—The uveal tract consists of three parts, the iris, the ciliary body and the choroid. Tuberculosis of this tract is the most common and serious form. It occurs primarily as well as secondarily, secondarily direct from the neighbouring tissues and also from the pulmonary region. The affection of this tract usually develops slowly and the condition may extend for months and months before the patient seeks relief. The symptoms are very mild and usually one eye is involved and the inflammatory symptom may be entirely absent or may be present slightly, if at all.

Iris—Tuberculous iritis may be clinically divided into 3 classes :—(*a*) Granulating iritis (*b*) Iritis with nodules and (*c*) Secondary Iritis, secondary to affections of some other affections of

the eye. The nodules vary from 2 to 3 m. m. in diameter and are grayish in colour and semi-transparent. Sometimes these nodules are met with deep in the stroma of the iris often breaking up and destroying the pigment epithelium of the iris. Occasionally a circumscribed conglomerate mass of tubercle presents the appearance of a yellowish neoplasm of that membrane commencing without any sign of inflammation. The mass continues to enlarge which gradually fills up the whole anterior chamber.

Ciliary Body—The ciliary body may be attacked either on the outer or inner side of the ciliary muscle. Unlike iris it may be in the form of small scattered miliary nodules or of a large conglomerate mass. The latter rapidly spreads inward destroying the pigment epithelium and filling up completely the circumlental space in its vicinity. In this conglomerate form the ciliary body may be affected with plastic exudation without being the seat of tuberculous nodules in which case the vitreous humour generally becomes shrunken and fibrous—a condition of pseudoglioma being produced.

Choroid—Choroiditis occurs either in small single or multiple but discrete foci or in the form of a single large mass. (a) Scattered miliary nodules are met with in cases of acute miliary tuberculosis and they generally develop shortly before death. The patches are met with in the posterior part of the globe in the vicinity of the disc and macula. They have a grayish yellow colour and there is no pigment proliferation around them. The vessels of the retina pass over them. A characteristic feature is the rapid appearance and growth of these tubercles after 12 to 15 hours. New foci can be observed which formerly were invisible. The pigment-changes so frequent in other forms of choroiditis are wanting in this form of tuberculosis.

The most serious form of eye-tuberculosis is that of conglomerate tuberculosis of the choroid *i. e.* granulating tuberculosis. It is usually one sided and causes an inflammatory condition of the whole uveal tract. Ophthalmoscopically it is seen as a prominent tumour of a gray white colour usually surrounded by numerous miliary tubercles. This tumour sometimes causes a detachment of the retina, sometimes it grows so as to resemble a glioma of the retina. Patient generally dies and in some cases the process perforates the sclera.

There is another form which can be called tuberculous granuloma with inflammatory signs, which may be very pronounced and which pre-eminently affects the young people.

The patients are under 20 and of very poor health and usually present other manifestations of tuberculosis.

Lens—Tuberculosis of the lens cannot occur primarily but opacity may be caused by nutritional changes. Occasionally owing to the destruction of the suspensory ligament dislocation of the lens occurs in tuberculous irido-cyclitis.

Retina—Primary affection is rare but secondary more frequent. It is found some times in young individuals with prevasculitis of the veins. Vision is diminished and the fundus examination shows opacities in the vitreous and haemorrhages either in the vitreous or on the retina. On careful examination a distinct vascular lesion is found. When the process is healed the site of the lesion will be marked by a line of choroidal atrophy running along side the vessel. A somewhat more pronounced variety is found in the so called "recurring vitreous and retinal haemorrhages in adolescents." The tuberculous nature of this condition was developed entirely from other clinical factors *viz.* the positive tuberculin reaction, the presence of tuberculous lesions in other parts of the eye and in the rest of the body. This type has a tendency to relapse and is common in males between the age of 18 and 30.

Optic nerve—Miliary deposits in the sheath, chiasma and optic tract may occur associated with meningitis and general tuberculosis. Papilledema may also occur owing to increased intracranial pressure. Localised tuberculous masses may affect the nerve head as well throughout its course and sometimes may give rise to symptoms similar to optic nerve tumours. The optic nerve may also be secondarily affected from iridocyclitis, choroditis and retinitis.

Orbit—Inflammation of the periosteum of the orbit is common at the margin along the temporal half than in the depth of the orbit. Slight injury over the region starts up protracted specific inflammation. Sometimes the bone is thickened, fluctuations develop and pus escapes. The probe detects a rough bone. In other cases fistula develops.

The Lacrimal sac may be the seat of tuberculosis from ectogenous infection but is usually secondary from the conjunctiva, from the bony walls of the orbit or from the nose. It runs a course of dacryocystitis principally in children leading to formations of excessive granulations. Considerable fibrosis of the sac wall may take place which is characteristic of this disease. Tuberculous involvement of the lacrimal gland is very unusual.

Nerves and muscles—Tuberculosis of the nerves and muscles of the eye shows itself in the form of paralysis of which insufficiency of accommodation and paralysis of the sympathetic are common, the latter results from pressure on the nerve from tumours in the neck such as enlarged tuberculous lymphatic gland and tuberculous affections of the apex of the lung.

CONCLUSION: The conclusions to which my observations point are (1) Ocular tuberculosis is much more common and frequent than is usually thought of (2) Two very well defined classes of these lesions exist (*a*) the destructive caseating and necrosing variety in which the infection is generally primary or part of a generalised distribution of tubercle, progressive and slightly or not at all amenable to treatment. Tubercle bacilli are frequently detected in these cases. (*b*) a much milder form of infection often called attenuated tuberculosis, probably of a toxic nature since tubercle bacilli and giant cells are rarely found. The primary focus is generally not in the eye and in many cases cannot be discovered by a careful investigation. A bronchial or mediastinal gland may in many instances be presumably the focus in question. In the second class recovery is the rule with more or less interference with vision according to the areas of the eye affected.* In the treatment of this latter group properly graduated tuberculin injections are of great value.*

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* Lecture delivered at the Senate Hall of the Calcutta University in the Post Graduate Course under the auspices of the Tuberculosis Association of Bengal and also at the Medical College Re-union, 1931.

Gynaecological Clinics of Europe

DR. SUBODH MITRA, M.B. (Cal.), M.D. (Berlin), F. R. C. S. (Edin),
Superintendent, Chittaranjan Sevasadan, Calcutta.

While representing Indian Radiological Association in the Third International Radiological Conference in Paris, 1931, I availed myself of the opportunity of observing the practical work of some of the gynaecological clinics of London, Paris, Berlin, Switzerland and Vienna, and it will be my humble effort to present before my learned colleagues some of the salient features of these Institutions so far as the practical side of work is concerned.

Before I began my work, I made a scheme of my own with a view to get the maximum benefit within a minimum time. The scheme was as follows:

(1) Obstetric work
  (*a*) Antenatal
  (*b*) Natal
  (*c*) Postnatal
(2) Gynaecological Surgery
(3) Gyneacological Pathology
(4) Gynaecological Radiotherapy, and

(5) Organisation of the hospital, particularly the management of the nursing staff and other working staff.

I tried to follow this scheme as far as practicable in every place, although it was not always possible for me to get the desired result. Let me begin with London hospitals.

London Hospitals

Chelsia Women's Hospital, Middlesex and St. Bartholomew's Hospitals. The antenatal department of St. Bartholomew's Hospital is under the charge of MALCOLM DONALSON. Expectant mothers visit the hospital once a week, when a thorough examination is made in each case, and history noted in a special chart of antenatal department. The following advice is given to expectant mothers :

1. Every pregnant woman must be seen by a docter before confinement in order to avoid trouble during pregnancy and at the time of labour. It is better that she should come for this examination early in the pregnancy.

2. She can be seen in the antenatal department of St. Bartholomew's Hospital on any Thursday afternoon at one o'clock ; but if she is suffering from any of the following disorder she must at once come to the Hospital and seek advice, namely :—

(*a*) if she has persistent headache.
(*b*) if she has dimness of vision or flashes of light in front of her eyes.
(*c*) if she has puffiness of face, hands or feet.
(*d*) if she passes only small quantities of water.
(*e*) if she has any bleeding.
(*f*) if she has any sores or discharge.

3. *Preparations for Labour.*

(*a*) Put as much furniture, ornaments, and and old clothes as psssible out of the bedroom before the doctor comes. The more room he has the better he can help you.
(*b*) Send for the doctor as soon as pains begin ; it is better for the doctor to be too early than too late.
(*c*) Have plenty of boiling water ready by the time the doctor comes.
(*d*) Have at least two clean basins ready.
(*e*) Have some protection for the bed ; for example, mackintosh or thick brown paper.
(*f*) Have a pair of clean sheets ready to put on after the confinement is over.
(*g*) Do not allow *any one* to make an internal examination before the doctor arrives.

4. *Advice about the Baby.*

In order to help you in taking care of your baby, bring the baby up to the Children's Department of St. Bartholomew's Hospital as soon as the lying in time is over.

DONALSON is also very famous for his radiotherapeutic work in gynaecology specially in carcinoma cervix-uteri. He is trying at present to establish the efficacy of intra-abdominal application of radium in cancer-cervix cases, an experiment formerly expounded by DAELS of Ghent. Abdomen is opened, and chains of radium tubes are inserted in the parametria both in front and behind the broad ligament. This intra-abdominal method is still in its experimental stage, and it is too early to assert its superiority to other methods.

VICTOR BONNY is decidedly one of the best gynaecologists of London. He operates both in Middlesex Hospital and in Chelsia Women's Hospital.

The operation theatre of the Middlesex Hospital is very spacious ; one third of the ceiling is made of glass, the walls are covered with very light blue glazed tiles and all metal parts are chromium plated. For general anaesthesia, ether, and raraly CO_2 are used. BONNY is a very careful surgeon. I would mention a few points from two of his operations *viz* :—A Wertheim's operation for cancer cervix and a Caesarean section. He uses 3 pieces of mackintosh to cover the cut surfaces of the abdominal wall ; the first one just over the skin before it is incised ; second one to cover the cut edges just short of peritoneum and third one attached to the self-retaining abdominal retractor. He uses silk for

ligaturing fallopian tubes and blood vessels, makes rather a slow but extensive dissection of the parametria separating the ureters in both sides ; the uterus with as much of the parametria as possible is then gripped with BONNY's modified WERTHEIM clamp, which seems to be a good instrument. After the uterus is removed pads soaked with an antiseptic lotion (rivanol) are used to mop out the pelvis. Vagina is kept open after panhysterectomy or WERTHEIM's radical operation. Tension stitches are given on the abdominal wall only when there is a chance of too much straining and the surfaces of skin stitched with continuous cotton thread. In this particular case of WERTHEIM's operation, tension of pulse was not very good after operation, and saline transfusion was immediately given. BONNY's idea is not to wait till the pulse is very bad. He says pulse becomes suddenly very bad after 5 or 6 hours, when practically nothing can be done. If saline transfusion is administered early, it is almost as good as blood transfusion.

The second case was a classical Caesarean section done for the second time for contracted pelvis. It was a waiting case and operation done about a week before the expected date of labour. Uterus was not contracting well at the beginning. Pituitrin was given only intramuscularly. BONNY lays special stress on swabbing the vagina after operation is over. Thus not only is the vagina made antiseptic but blood clots are also removed from vagina. These blood clots, if not removed, might give a false fright to the nurse-on-duty necessitating an unnecessary call for the surgeon.

Chelsia Women's Hospital has got about 100 beds divided into general and private wards and there are some special cabins. Patients are to pay about Rs. 70 a week in private wards ; in general wards patients pay according to their means varying from Rs. 10/- to Rs. 42/- a week. Office settles the payment. In case a patient is very poor, the office gets the minimum amount from some benevolent society. Each patient has got a separate electric bell, electric light, a small radio-hearer and arrangement to screen off from rest of patients. There is no medicine or linen almirah in the ward. All the necessary requisitions are kept in a room adjoining each ward. Four nurses are on duty for each unit of 25 patients. Two of them are staff nurses and 2 probationers. Nurses are to do any thing and every thing concerning patients including serving of bedpans. It is a strict injunction in London hospitals (as we shall see in other European hospitals too) that bedpans are given by the nurses, taken off by the nurses and cleaned by the nurses. They cannot think that bedpans can be given by anybody but nurses. Sweepresses only clean the floor and none of them are on duty at night.

The grand kitchen of the hospital consists of two big spacious halls from where food is taken in a special food carrier (prepared by Hotlock Ltd., London) to the ward kitchen from where food is sorted and sent to the respective patients. There is a monthly consignment for each article of food, and a special officer is entrusted with the management. Linens are kept in the general linen room, from where the staff nurses get the supply for their respective wards, and keep them in a separate small ward-linen room. Matron checks all linens twice a year, and condemns torn linens once a week. The ladies' Committee finally confirm the condemned linens and indent fresh ones supplied by them.

Each candidate for acceptance as a probationer will in first instance be received by the matron for a period of one calender month on trial and without salary. Probationers shall be under the authority of the matron, and in case of serious misconduct or neglect of duty, may be suspended by her pending reference to the weekly board. Salary for the first year is Rs. 280/- per annum and for the second year Rs. 350/-. Each nurse is required to enter for examination in the hospital by its own appointed examiners. If successful, she is also entitled to enter for Preliminary State Examination. Each nurse on completing her 2 years' training to the satisfaction of the matron, and passing the prescribed examination held in the hospital will be awarded a "Hospital certificate of training", signed by the chairman of the Council, the senior surgeon, examiners and the matron. Each probationer has got 56 hours' duty a week, and will be granted leave of absence as follows :

During day duty, two hours' off duty daily and one day off duty weekly. During night duty, 2 nights off fortnightly, and three weeks annual holiday.

Paris Hospitals

Baudelocque Clinique and Hospital Salpetiere are the two best hospitals in Paris for obstetric and gynaecological work under the guidance of PROF. CONVELAIRE and PROF. GOSSET respectively. The Out-patients Department of Baudelocque Clinique is divided into 3 sections *viz* (*a*) Gynae cological section, (*b*) Social Service and Hygiene section and (*c*) Infant Welfare section for children under one year. The work in the Social Service and Hygiene section is mainly antenatal, but instructions are also given for the prevention and cure of specific diseases, and tuberculous affections. There are about 200 beds in the Baudelocque Clinique, mainly obstetrical, and divided into several units. The special obstetric units for tuberculous cases, heart diseases, toxaemia cases, septic cases, for thrombophlebitis cases, and for prematurely born infants are worthy of note. The newborn babies are kept in a separate ward and brought to the mothers only during feeding. It is indeed a speciality in Baudelocque Clinique to have a wonderful organisation for the care of infants beginning from prematurely born babies right up to children of one year, who are taken care of in the Out-patients Department. The infant mortality is about 4%, and mostly due to tuberculosis. Green-diarrhoea is practically unknown in Paris.

Labour cases are conducted in special labour beds in the labour rooms. There are 2 such beds in each labour room which is four in number. The labour bed is so constructed that half of it can be separated, and leg rests can be attached for any surgical interference. All labour cases are first examined in the out-patients department, and then admitted in the labour ward or labour room. Matron or assistant matron, and one of the assistant doctors are always present in each labour case. There are six house surgeons in the whole Clinique, and the number of labour cases are on an average 12 to 14 per day. Patients are kept in the labour room for about 3 hours after confinement, and then sent to the ward. They are equally strict about bedpans here as in London, and moreover they sterilise them by steam. There is also a big sterilizer for mattresses. Regarding food, normal labour cases get the usual European diet in the puerperal period which lasts about 10 days. In the morning at 7-30 A.M., they get coffee with milk and bread. At 12 noon, soup, meat or eggs, vegetable, jam, cheese and sometimes fruits. At 7 P. M. same as at noon.

The gynaecological surgery is not very satisfactory in Paris. PROF. GOSSET and PROF. FAURE are the two best men, but they always do the general surgery along with gynaecology. In one morning, they would do decompression operation, herniotomy, gastro-jejunostomy and hysterectomy. They use catgut in pelvic surgery including tying of fallopian tubes and uterine vessels, but the abdominal wall is generally closed with silk and cotton ; first layer consisting of peritoneum and extraperitoneal tissues with continuous silk, second layer consisting of deep fascia with interrupted silk and skin with interrupted silk or cotton. The technique in operations is simple and very fine indeed, but the general impression which one carries from the management of operation theatre is not very high. Experimental operations on animals are much in vogue in Hospital Salpetiere.

The Cancer Institute of the Faculte de Medicine de Paris is one of the best and most up-to-date organisations for the treatment and prevention of cancer. The Institute is situated in a vast plot of land having maginificent buildings for hospitals, laboratories and residence of the working staff. The whole thing was planned out in 1925, and the construction cost millions of francs generously contributed by the public, the municipality and the Government. The whole organisation is divided into 3 departments :

(1) Scientific Research Department.
(2) Clinical Department.
(3) Propaganda Department.

In the Scientific Research Department there are 6 laboratories all exhaustively equipped. They

are (*a*) Pathological Anatomy Section (*b*) Experimental Medicine Section (*c*) Physico-chemical Section (*d*) Biochemical Section (*e*) Section for Experimental Cytology (tissue culture), and (*f*) Serological and Bacteriological Section. Each section is in charge of experts specially trained in respective subjects. The clinical department consists of post-graduate teaching both in theory and in practice under the direction of PROF. ROUSSY. The Radiotherapeutic Section consists of a radium-bomb containing 1000 milligram of radium, and specially manœuvred by MADAME LABORDE. There are also various kinds of radium tubes and needles and high voltage deep therapy apparatus. PROF. ROUSSY lays special stress on the Propaganda Department. His idea is that by proper representation of facts about cancer in simple words, early cases will be more frequently detected and treated to the satisfaction of the physicians and patients alike. It is with this idea that the management circulates pamphlets on cancer, and gives notices on walls, an example of which is given below. ROUSSY emphasises that there should be more centres of work in one city than one big centre to facilitate the conveyance of the patients.

Notice runs like this (translated from French)

FIGHT AGAINST CANCER.

Cancer is curable if treated early.

Patients having tumours or cancers residing in Paris or in the neighbourhood can be examined at its anticancerous centre under PROF. ROUSSY.

* * * * *

In order to be admitted and treated at the anticancerous centre, the patients must be registered in their districts.

(Sig) Mayor of Paris (Sig) Mayor of the Dist.

A few words about the gynaecological therapeutic section of the Third International Radiological Congress and I shall finish with Paris. The Congress was well represented by the well-known workers of America, England, Germany, Austria, Switzerland etc. and only for the first time it was represented this year by India. My paper on the "Radiation therapy in Cancer Cervix-uteri in India" excited a curiosity among them, and they were very keen and anxious to know all about cancer in India. There were 25 papers in the Radiotherapeutic section chiefly concerned with gynaecological affections. 17 papers were written about carcinoma uteri, of which 7 papers were contributed from Germany, 2 papers from America, 2 papers from France, one paper from Italy, one paper from Vienna, one paper from Stockholm, one from Budapest, one from Spain and one from India. Most points of discussion were about the incidence and frequency of cancer cervix, prevention of carcinomatous conditions, early detection of the malignant diseases, different technique of treatment, and the comparative statistical results of 5 year cure. So far as the management and organisation are concerned, the Radium-hemmet of Stockholm is the ideal Radium Institute under the able guidance of FORSELL and HEYMAN. The Swedish Government and the municipality are contributing generously for the extensive organisation, and the poor patients are even paid for their journeys to and from the Radium Institute. It is really gratifying to know that HEYMAN could follow up every one of his hundreds of carcinoma cases who presented themselves for treatment to the Radium-hemmet.

We know the time-old dictum "Prevention is better than cure", and ORNOFF of Chicago insisted on the value of periodic pelvic examination for women between 30 and 50 years of age by physicians trained and equipped for this special class of work. This would certainly help in the early detection of cases and the results of treatment would be far more satisfactory. The method of treatment has not yet been definitely established. The radical operative procedure is almost as equally advocated as the radiation therapy. The best surgeons of Europe headed by BONNY of Middlesex and Chelsia Women's Hospital, WAGNER and STOECKEL of Berlin University Women's Clinics and gynaecologists of Paham Kermanner clinics of Vienna warmly adhere to radical operations in carcinoma cervix-uteri. But the greatest boon of the radiotherapy is that both early and late cases can be

taken into hand and even a certain percentage of cure is forthcoming from hopeless cases, which can never be tackled by surgery. Statistics show that cancer of cervix-uteri is about one-third of all cancers, and chronic irritation of cervix accounts for its very high incidence. Any irregular bleeding alternating with leucorrhoea in a woman after 30 should be looked upon with suspicion, and she should always have the benefit of doubt by a thorough examination by a well trained physician.

German Hospitals

Germany is a fertile land of science. Of the many women's hospitals there, I am personally acquainted with University Frauen Klinik (so called Bumm's or Stoeckel's Klinik), Charite Frauen Klinik, Strassmann Frauen Klinik and Virchow Krankenhans of Berlin, University Frauen Klinik of Munik and University Frauen Klinik of Franfart a/M. These are chiefly important women's clinics and most of the original work and initiative came from them.

Berlin University Frauen Klinik has got 163 beds, of which 56 are obstetric and the rest gynaecological. In the obstetric department, patients with labour pains are first taken into the admission room. Sister-in-charge takes up the history and sends her either to the septic or aseptic ward as the case may be. She gets a shower bath and an enema and is then sent to the labour room, which contains 6 beds. Patients are confined by Sister-on-duty. Doctor-on-duty attends only the abnormal cases. Students are allowed to conduct normal cases and to do forceps delivery in presence of doctor-on-duty.

In retained placenta cases, they inject sterile solution (about 2 pints) through the umbilical cord and for this purpose they always keep ready a big metal syringe, a can, a canula and rubber tubing in a sterilised linen bag. Failing this method, manual removal of placenta is resorted to. In gynaecological operations, local, parasacral and spinal anaesthesia are much in vogue. Dilatation and curetting operations are done by local anaesthesia. About 30 c.c. of 0·5% novocaine solution is injected in the paracervical tissues. Other vaginal operations are generally done by parasacral anæsthesia. 2nd and 3rd intrasacral foramina of both sides are injected with 0·5% novocaine solution (about 40 c.c. in each), and also the tissues surrounding the vaginal introitus. About 140 c. c. of 0·5% novocaine solution is required and special long needles are necessary to reach the intrasacral foramina. Anterior colporrhaphy, posterior colpoperineorrhaphy, trachaellorrhapy interpositio uteri and even hysterectomy operations can be very easily done by parasacral anaesthesia. This clinic is in favour of radical Schauta vaginal hysterectomy operation in operable cancer cervix cases. Result is satisfactory. Primary mortality is said to be minimum by this method. I shall mention only a few important points in the technique. A case of cancer cervix of the proliferative type: Anaesthesia—Ether and chloroform. The proliferative growth was first curetted out and the raw bleeding surface cauterised with benzene cautery. Paravaginal tissues injected with adrenalin 1 in 1000. Paravaginal incisions were given on both sides. A circular incision about 1 c.m. above the raw surface of cervix was then dissected and reflected over the cauterised surface and stitched together with thick cotton thread, thus entirely closing the cervical cancerous surface. Next the pouch of Douglas was opened and anterior bladder dissected up. Laterally parametrial tissues were slowly and cautiously dissected out until the crossing of the ureter by the uterine artery was found. Uterine artery clamped, cut and ligatured with catgut, and ureter further dissected out. Next the fallopian tubes and ovarian ligaments were clamped and cut on the uterine side, and finally the uterus removed with as much of the parametrial tissue as possible. Tubes and ovaries were kept. Peritoneum was closed, and vaginal cut margins were kept separate by iodoform gauze. While STOECKEL operates almost all his cancer cervix cases by Schauta vaginal route, WAGNER of Charite Frauen Klinik follows WERTHEIM'S radical abdominal method. We find the same thing in Vienna in the 1st and 2nd University Frauen Kliniks respective-

ly. The outstanding speciality in Strassmann Frauen Klinik is that Iodine or any other strong antiseptics are rarely used. STRASSMANN washes his hand with boiled water and then rubs the skin with sterile boric powder. He claims to have got very good results by this method. STRASSMANN very kindly arranged a lecture for me in the women's hospital, where I spoke on "Ancient and Modern Midwifery and Gynaecology in India". I had the opportunity of speaking before the leading gynaecologists and professors, who were very much impressed with the invention of DAS's forceps and MUKHARJEE's conservative method of treatment in many obstetric conditions.

The University Frauen Klinik of Munich is perhaps the biggest women's hospital in Germany although gynaecological surgery is at its highest pitch in Berlin. DODERLEIN deals with all his cancer cervix cases and most of the fibroid tumours with radium and deep X'ray therapy. There are about 250 beds in all, and divided into 1st, 2nd and 3rd classes. All patients are to pay, the charge of 3rd class being Rs. 3/- per day. If a patient cannot pay, some philanthropic organisation pays for it. Hospital does not suffer. Generally one sister attends 13 patients *i.e.* 3 sisters for a ward of 40 beds. The working hours for sisters are from 6 A. M. to 8 P. M. except one hour's rest and about an hour for lunch and prayer. At night only 4 sisters manage the whole hospital. Obstetric cases are conducted by qualified midwives who are quite different from the sisters. Sister's duty in the labour ward begins from the time the patient comes to the ward. Labour room is entirely managed by midwives two of whom are always on duty at a time. Doctors intervene only in abnormal cases. There are about 3000 labour cases every year. This nurses' management is quite unique in this place. They are all recruited from Catholic order, who have taken the vows of poverty, chastity and service. These sisters are wonderfully gentle and amiable in their behaviour however unreasonable the patients may be. They look as if they are perfectly resigned to God ; besides their expert nursing their sweet motherly care gives an additional soothing effect to the patients. It is really a great boon to the hospital to get the service of these sisters, and with the minimum expenditure. DODERLEIN very kindly arranged a conversazione where I had the opportunity of meeting other professors and gynaecologists of the Frauen Klinik. We had a discussion on varied obstetric problems. They have never seen a case of anaemia of pregnancy for many years and were very much surprised to know about the enormous number of cases, and their heavy mortality in India. In eclampsia they use luminal instead of morphine and chloral hydras. Caesarean section is very frequently done in eclampsia. We had an exciting discussion about the treatment of placenta praevia. They are very fond of doing Caesarean section in placenta praevia, although the maternal mortality is something like 8 to 10%. It was difficult for me to make them understand that in 1930, there was not a single case of death in placenta praevia in Seva Sadan, where we followed an entirely conservative method. A case was cited by the Resident Surgeon. Multipara full tern having slight bleeding for 2 or 3 days. Family physician gave an ergot mixture : bleeding was profuse ; vaginal plug was given and the case was sent to the Frauen Klinik from a distance of 10 or 12 miles. Patient was extremely exsanguinated and on admission immediate Caesarean section was done. Patient died. They would never admit that this case could have been treated and perhaps in a better way by following the conservative method. The Pathological Laboratory is simply grand and one cannot but look with admiration the wonderful arrangement and recording of each and every case of interest. All the cancer cases, doubtful or definite, have undergone a microscopical examination and since 1905, two slides and the paraffin block of each case have been preserved, so that DODERLEIN can verify anyone of his thousands of cancer cases of the last 25 years in 5 minutes' time. This method has now been universally taken up every where in order to facilitate a comparative and statistical study of the most important problems of the day.

Switzerland Hospital.

PROF. WALTHARD is in charge of the University Frauen Klinik of Zurich, which has got 200 beds. The antenatal work is well organised. Leaflets and letters are given to the expectant mothers and to their husbands. The following is an example (translated from German):

"IMPORTANT NOTICE TO AVOID PUERPERAL FEVER"

1. To avoid puerperal fevers, one must avoid marital intercourse during the last 8 weeks of pregnancy.
2. To avoid puerperal fevers, one must avoid vaginal douche unless advised otherwise by the specialist doctors.
3. To avoid puerperal fevers one should avoid public baths: one should take only a shower bath, and never sit in the bath-tub during the last 8 weeks of pregnancy.
4. To avoid puerperal fevers, one should avoid public toilets during the last 8 weeks of pregnancy.
5. To avoid puerperal fever, the expectant mother should not nurse any member of the family, who has got an open wound or an abscess.
6. To avoid puerperal fevers one should try to avoid as much as possible touching the private parts of the body; if necessary, to do it after washing the hands thoroughly with soap and warm water.
7. To avoid complications of pregnancy, the expectant mother should have her urine examined every 3 months.

PROF. M. WALTHARD
Director, University Frauen Klinik, Zurich.

As soon as a labour case comes to the Hospital, she is taken to the admission room and from there, if it is a clean case, she is sent to the bathroom quite close to the labour room. There the patient gets an enema and should always use a bedpan which has been very carefully sterilised under high steam and kept covered in a sterilised linen bag. Patient is never allowed to use the ordinary closet. Next she gets a shower bath where she is not allowed to sit but to stand all the time during bathing. Next she is dressed to Hospital clothing, weighed and sent to labour room or labour ward as the case may be. Labour cases are examined by doctor per rectum, and confined on dorsal decubitus. After confinement breast is dressed with Borofax and the use of spirituous preparations as antiseptic agents is never allowed. Patients can get up on the 5th day and go home between 7 and 10 days. The Sister in charge of the labour ward conducts everyday a course of gymnastics in bed to all the patients in puerperium. She stands in the middle and makes the same course herself with all the patients. Patients even from the second day of puerperium follow the course.

Another speciality of Walthard clinic is that almost all the cases of placenta praevia are treated by "Extraperitoneal Caesarean Section", including even those cases which have been treated outside by vaginal plugging. The result is said to have been very satisfactory. In cancer cervix cases PROF. WALTHARD does radical total extirpation followed by deep X'ray therapy.

Vienna Hospitals.

Vienna has got an international fame for all kinds of medical studies and specially for the study of obstetrics and gynaecology. The University Frauen Klinik of Vienna is perhaps the biggest Hospital for women in the world, and is divided into 1st or Peham clinic and 2nd or Kermauner clinic having 200 beds in each division. Everything is taught in German language but elaborate arrangements have been made by the American Medical Association to have detailed lecture and practical courses in English, and the whole course can be finished in 3 months. Professors are very friendly and one can get a general impression of continental teaching without spending much time and energy. But unfortunately the real spirit of science and research work is on its wane in Vienna and every thing is being directed towards mercenary ends. The country has become very poor after the War, and it is extremely difficult to keep up the grand show.

In the O. P. D., there are 4 divisions *viz.*

1. General Gynaecological Department

2. Urological Department
3. Obstetric Department
4. Social Hygiene Department.

Labour Room contains 10 labour beds. The assistant doctor is always present in each confinement case but cases are generaly taken by the qualified sister and students. One of the many specialities is that they are always in favour of doing vaginal hystorotomy for artificial termination of pregnancy from 3 months onward. Regarding the management of carcinoma cervix cases, the Peham Klinik always does WERTHEIM'S radical abdominal operation and the Kermauner klinik always does Schauta radical vaginal operation. PROF. ADLER of Wilhelminspital Frauen klinik also follows Schauta radical vaginal operation and claims to have got equally good or better results than radiotherapy in operable cancer cervix cases. He has been invited in America to demonstrate his technique of Schauta radical vaginal operation.

Radiotherapy in carcinoma cases is not much favoured in Vienna and on the whole seems inferior to that in Germany and France.

Now I would say a few words about radiotherapy in cancer cervix-uteri and conclude.

Radiation therapy of cancer cervix uteri has reached its climax in the hands of FORSELL (Stockholm) REGAUD (Paris) and DODERLEIN (Germany) who have received an international recognition and whose results have been accepted by the health organisation of the League of Nations.

Radiotherapy, though a later method of treatment has made so much progress that it now stands as a rival to operative treatment and it is now a serious and important problem of the day to decide what therapeutic measure to employ; but whatever may be the method of choice, success depends on 2 factors only *viz.* early diagnosis, and early and appropriate treatment.

Carcinoma cervix-uteri is generally divided into operable, borderline and inoperable group according as the growth is limited to the cervix, in the parametria or spread over the distant parts or organs; it has also been divided into 4 stadiums of which the first stadium refers to the operable group, 2nd stadium to the borderline group and 3rd and 4th stadia to the inoperable group. The last classification has been accepted by the Cancer Commission of the League of Nations.

But whatever may be the classifications, unfortunately the early cases are very rarely met with. Cases of the 1st stage or operation group are only 25·5% in Stockholm, 17·2% in Germany (Munich) and about 10% in Paris. Inspite of colossal ignorance and multifarious difficulties with which our women are encumbered, we find the operability rate to be 10·5%—out of 360 cancer cervix-uteri cases (or 25% out of 24 cases of 1926) who were treated in the Sevasadan Women's Hospital. The technique in radiotherapy varies in different places, but the principle of treatment holds good every where. A combined treatment with radium and deep X'rays is much better and more effective than the treatment only by radium or by X'rays. Radium elements give better result, than radium emanations. Radium tubes are inserted partly in the uterine cavity and partly in the vagina and screened by heavy filters made of gold, platinum, brass or lead. On an average about 6 to 7000 m.g. hours are given to each patient in 3 sittings. Deep X'ray treatment is given from a high voltage apparatus enabling one to work with Ca 200 K. V. in the Coolidge tube. Exposures are given from different portals *e.g.* hypogastric, sacral, lateral and vulval and each time a full skin-erythema-dose is given. The best results of X'ray treatment have been obtained in Germany by PROF. WINTZ, the Director of Women's Clinic of Erlangen University. Regarding the results of treatment, all the above mentioned pioneer workers have taken the conventional 5 year as the minimum period to declare a case cured or at least free from disease. HYMANN of Forsell clinic (Stockholm) gives a 40·4% cure in all his operable cases, RIGAUD 42% and VOLTZ of Doderlein clinic 40·5%. In inoperable and operable cases combined, HYMANN has got 22·1% (total no. of cases being 737), RIGAUD 20% (total no. cases 350), and VOLTZ—15·4%

(total no. of cases 1,319) In the Sevasadan Women's Hospital, we have got 360 cases of cancer-cervix uteri (between 1926 and 1930), of which 24 cases have been treated over 5 years. 16% of all these 24 cases have passed through the conventional period of 5 years and if only the cases of the first group are considered, which are 6 in number, the percentage of cure goes up to 50. Unfortunately, it was very difficult and sometimes impossible for us to take a microscopical section in some of our cases, a procedure which ought to be rigidly followed in every case in order to give a definite clear cut opinion in each case, but the bulk of these cases were personally examined and diagnosed by our Chief Surgeon, DR. BAMANDAS MUKHARJI and the rest of the cases were sent to the Sevasadan Women's Hospital by wellknown gynaecologists like COL GREEN ARMYTAGE, COL GOW, DR. KEDARNATH DAS, DR. NARENDRA NATH BASU and DR. J. M. DAS for the obvious treatment of carcinoma cervix-uteri.

The adjoining table will show that our results of Radiation therapy in cancer-cervix cases in the Seva Sadan Women's Hospital do not fall far short of in comparison with the recorded results of the best European clinics, although our materials of the first year are not much.*

* Lecture delivered under the auspices of the Bengal Branch of the Indian Medical Association on 7th Dec. 1931.

TABLE

Names of Clinics.	Total No. of cases treated.	Alive after 5 years.	% Cure	Operable				Remarks.
				No. of cases.	% Operability	Alive after 5 years.	% Cure	
Stockholm Radium Hemmet	737	163	22·1	188	25·5	76	40·4	
Fondation Curie Paris	350	70	20	38	10	16	42	
Doderlein Clinic Munich-Germany ...	1,319	222	15·4	227	17·2	92	40·5	
Seva-Sadan Calcutta	24	4	16·6	6	25	3	50	Cases only of 1926 are taken up.

JOURNAL
OF
The Indian Medical Association

Vol. I JANUARY, 1932 No. 5

Editorial Comments

It will be remembered that at the last All-India Medical Conference held at Poona in April 1931 the case of the Licentiates received considerable attention and formed the subject of a lengthy resolution which we cite in part for the benefit of our readers :

"This Conference is of opinion :

(*a*) That the preliminary qualification for admission to all medical institutions should be the Intermediate Science Examination Certificate of different Indian Universities or its equivalent ;

(*b*) That it is urgently necessary to improve the equipment and standard of education in the medical schools so as to approximate the same to that of the medical colleges of the University standard ;

(*c*) That in the meanwhile the Conference strongly recommends :

(1) That the training of the Licentiates should be improved by

(*i*) Extending the period of instruction in the medical schools to at least five years throughout India,

(*ii*) The better equipment of medical schools, and

(*iii*) The appointment of better qualified teachers therein."

The full resolution is a very comprehensive one, and it is a matter of congratulation to the Indian Medical Association that a part at least of the recommendations contained in this resolution has been adopted by the Bengal Council of Medical Registration. At a meeting of the Council not long after the Poona Conference a resolution was passed appointing a joint committee of the Council and the State Medical Faculty (which is similar in function to the examination boards of other provinces) to inquire into the question of lengthening the Licentiate course in Bengal. At a meeting of the Bengal Council of Medical Registration held on July 16th 1931 a further resolution was moved to raise the preliminary qualification for admission to all medical institutions to the Intermediate Science Examination certificate or its equivalent. This resolution was referred to the joint committee appointed to consider the question of lengthening the course, and this Committee have now submitted their report. Their report makes interesting reading and supports the claim both for an extension of the course to five years and higher qualification for admission, though not the intermediate science examination. We are certain that the recommendations will command a wide measure of approval, for those who view the needs and ambitions of the Licentiate section of the profession with sympathy will readily support any measure intended to improve the training of the grade and thereby raise its professional status.

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The agitation for the improvementt of the Licentiate course, whether in curriculum, teaching staff or length of period, has been a protracted one. There have been many difficulties to be faced and opinion has been somewhat divided as to whether a higher qualification and the lengthening of the course by one year would be generally beneficial. The Licentiates form by far the largest section of medical practitioners in Bengal. The health and welfare of the population of the province may therefore be said to rest largely in their hands. Even then, however, their numbers are hardly large enough to meet the requirements of the population, and it will be agreed that no change likely to restrict recruitment to their ranks should be introduced. It was this fear that dissuaded many from supporting any higher entrance qualification and any extension of the course. At the same time it must be said that those concerned with the teaching of Licentiates admitted frankly that a great deal of loss in time was incurred by the fact that new entrants had to be taken over ground which they were reasonably expected to have traversed before admission. Indeed, the fact remains that most of the students failed to pass out at the end of four years and had to make an additional attempt, which, for practical purposes prolonged the course by one year.

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There are others who considered that by raising the preliminary qualification and by lengthening the course the extra expense entailed by parents and guardians would prove deterrent to recruitment. By way of analogy reference was made to Siam where the entrance qualification upon being raised created a dearth of applicants for a grade of medical practitioners corresponding somewhat to the Licentiates grade in Bengal. But it is not certain that this analogy could be made to apply to Bengal as the exact conditions in Siam may have been different to those in this province. It may be that the authorities in Siam, in their eagerness to improve the status of their medical practitioners pitched the initial qualification too high for students there.

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There is also the broader aspect of the case. Viewed from the economic standpoint, one has to admit that the poor economic condition of the masses requires a grade of practitioners that is not too far above their means. So far as these people are concerned, it would be immaterial to their interests if the higher qualifications of the grade entitled the practitioners to a higher scale of emoluments than was economically possible for them to bear. A solution might lie in multiplication of hospital facilities, but this is quite another question. So far as the people are concerned, their interests require to be served by a reliable profession in whom they have faith and whose services would not be above their means to pay for.

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But after all this has been said, there remains a strong body of opinion that the interests of the profession itself and a large section of the population required some improvement in the standard of Licentiate training and it remained with the joint Committee to which we have referred to find a compromise between the views expressed on one side and the other. It is satisfactory to note that the report of this Committee has been successful in arriving at such a compromise, for with a view to improving the preliminary qualification they have recommended the adoption of the Matriculation standard *with* a science qualification and a period of study of five years instead of four.

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In order to give effect to these decisions, particularly that of the five years' course, very large and substantial alterations and additions will have to be made to the equipment and teaching arrangements in the medical schools. So far as we know, there are only two amongst the Government schools and one among the independent non-official schools in Bengal that may now come up to the requisite standard with some effort, but as regards the rest we trust that in the near future they will make up their deficiencies and, in fact, we shall be happy to see some of the existing schools raised to the status of university colleges. The Bengal Council of Medical Registration, however, is not the final authority, for the policy underlying the gradations of medical education rests ultimately with Government. We shall, however, watch with interest what action Government, and the State Medical Faculty as well, take in this matter.

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We are not unmindful of the fact that the large question of supplying an adequate number of medical men to the population has to be solved, even after the elevation of the licentiate grade. So far as Bengal is concerned, with a population of some fortyfive million, it would require at least twentythree thousand practitioners at a proportion of one in every two thousand. Up to this time, we have succeeded in fulfilling only a third of the requirements, that is to say, nearly two-thirds of the population cannot expect the benefit of proper medical aid and have perforce to depend upon untrained attendants of various denominations in times of illness. At one time, about eighteen years ago, the training of a class of village practitioners for the benefit of the rural population was contemplated, but nothing materialised. The time has now come when the Government and public require seriously to consider the question of a large class of medical practitioners who may have passed through a fairly reasonable course that may not be as high as that of the Licentiates.

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We would draw attention to the notice of the next All-India Medical Conference. Once again this Conference has had to be postponed to a later date than usual, and the Central Council of the Indian Medical Association have decided to hold it during the Easter holidays at Calcutta. It is hoped that the time and place will prove convenient to most delegates and others who usuallly attend this annual gathering of the Indian medical profession to discuss important matters appertaining to their interests. On this occasion, the Indian Medical Council Bill is likely to prove the chief item on the agenda and in view of so important a question it is hoped that a really representative conference will be available. These conferences are increasing in importance each year as they serve to bring Indian medical opinion to a focus and to make for unity of purpose, of action and of policy. It is hoped also that the response to the scientific section will be a good one. An exhibition of medical and scientific products is also being arranged and manufacturers who are alive to their opportunities are recommended to apply early for sites as the space available will be limited and the demand for space is usually large.

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We accord a warm welcome to the Bombay Medical Journal published under the auspices of the Bombay Medical Union and under the editorship of DR. M. D. GILDER, B.A., M.D., F.R.C.S. We welcome this new arrival in the field of Indian medical journalism because we feel the field is large enough for this and many more medical journals and because it shows that the medical profession in India are becoming increasingly alive to their interests. The Bombay Medical Union is to be congratulated on its enterprise and we wish the journal a long period of useful activity.

Medical News and Notes

[Items of news and notes of general interest to the profession for incorporation in this section from the members of the profession will be greatly appreciated—EDITOR]

Value of Indigenous Medical Systems. At the Government School of Indian Medicine, Madras, the first Conference of Licentiates in Indian Medicine was declared open on the 2nd inst. by the Hon'ble SIR M. KRISHNAN before a large number of delegates from different parts of the presidency, including a large number of lady practitioners. DR. C. NATESA MUDALIAR presided over the Conference.

The Hon'ble SIR M. KRISHNAN among other things said: It was the wisdom and interest of the late Raja of Panagal in Indian Medicine that had made it possible for such an institution to come into existence. Eastern medical systems were languishing for want of encouragement and support though they had attained a very high degree of efficiency centuries ago. But while the votaries of the western system had been ever carrying on experiments and research work, some of them even at the cost of their lives, practitioners of eastern systems were content with the knowledge acquired and apathetic. This was noticeable particularly in the field of surgery. He cited several cases, where practitioners of Ayurveda and Unani systems had cured complaints which allopathic practitioners had given up as incurable.

The Chairman of the Reception Committee, referred to some of the handicaps which L. I. M. 's were labouring under in the matter of registration and recognition and said that Government should treat them as on a par with practitioners of other systems.

As an auxiliary to the Conference, an exhibition of medicinal plants and Indian drugs and medicines was arranged. The collection which included common as well as rare medicinal plants, herbs, roots and seeds had been properly classified and labelled giving their names in different vernaculars. There were charts giving the methods and purposes of some special Malabar treatments such as "dhara".

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Narsapur Medical Extension. The strenuous efforts of the local Civil Assistant Surgeon, MR. UDAYACHALA RAO, have resulted in the sanction by the Madras Government of the use of the old Revenue Divisional Office for hospital purposes. This building is now used as the out-patients' department while the old hospital is utilised for in-patients. The long- standing want of a well-equipped hospital for Narsapur has thus been removed.

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Information of Patients Restricted. The authorities of the Emergency Hospital, Madras started for treating wounded volunteers have been informed by the local police that if photographs or any information regarding the patients are supplied to the Press then the hospital would be treated as a centre of picketing activities and steps would, therefore, be taken to close it down.

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New Hospital in Coimbatore. MR. S. H. SLATER, District Collector opened on the 16th December last a new hospital which was a gift by the Rev. MR. BRUFF, head of the London Mission Society at Erode, at Chennimalai near Perundural. Chennimalai is a well-known pilgrim resort and thousands of pilgrims visit the temple on the hill. The hospital was constructed by Rev. BRUFF in memory of his son who died in the War. The building had been constructed at a cost of about Rs. 10,000 and provides 16 beds of which 4 are for use as private beds for people who can afford to pay. The hospital will be in charge of a qualified doctor and Rev. BRUFF also stated that he proposed to open shortly a leper hospital at Chennimalai.

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Medical College, Madras. The Government have passed orders on the recommendations of the Retrenchment Committee and the proposals of the Surgeon-General in regard to levy of fees in the Medical College. They have directed that fees should be levied at the following rates from students belonging to the Madras Presidency (excluding Indian States): Fee for the whole Pre-registration course Rs. 120; for the course in each subject Rs. 40; for the physical science graduate Rs. 40; fee for the medical course proper, 5 years annual fee Rs. 200, for the whole course if paid in advance in one sum Rs. 900; for additional course in subjects other than the final year students Rs. 50 for each subject; for supplementary course for students who fail in the final L.M S., or M.B., B.S., Rs. 100. The annual registration fee of Rs. 5 should also be levied.

It respect of the students not belonging to the Madras Presidency, fees shall be levied at twice the above rates. These changes will come into effect from the next academic year and will be applicable to new entrants only, the existing students continuing to pay the old rates until the completion of their course.

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State Recognition for Ayurveda. According to the Free Press, the Bengal Government at the instance

of the HON'BLE LT. BEJOY PRASAD SINHA ROY, Minister of Local Self-Government has taken up a scheme for establishing a Council of State Medical Faculty of Ayurvedic Medicine for the restoration and development of Ayurvedic system of treatment. The scheme is now being considered at a conference of experts called by the Minister and if it comes out modified in the light of expert suggestions, it is sure to give a great impetus to the indigenous system of treatment which is well suited to the requirements and physical condition of the children of the soil.

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Calcutta Medical College Re-Union. The Calcutta Medical College Re-Union, 1931 was held with due eclat in the College compound commencing on the 15th December, 1931 and lasting for 4 days. A feature of the programme was that it included diversities of a very wide nature. There was a series of clinical demonstrations in the College hospitals and clinical lectures in the General Lecture Theatre during each of the three days. The opening ceremony was performed and an address with special reference to the teaching of those days was delivered by the President, DR. SUNDARI MOHON DAS, M. B., an ex-tudent of the College in a huge pandal erected for the purpose. The Exhibition (the exhibitors numbered about 30) was opened by the Hon'ble Minister, Local Self Government, Bengal and was a grand success. Garden parties were given by the Principal of the College and by a reputed manufacturing concern of the city. The entertainment section consisted of cinema and a few theatrical playlets both English and Bengali enacted by past and present students. A number of tennis matches between students and doctors were held and proved highly enjoyable.

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Another Hospital in Calcutta. The opening ceremony of Ramrikdas Haralalka Hospital was performed by DR. B. C. ROY, M.D. (Cal.), M.R.C.P. (Lond.), F.R.C.S. (Eng), Mayor of Calcutta on Sunday the 17th January, at No. 104, Ashutosh Mukherjee Road, under the auspices of the Presidency Medical Education Society before a large gathering.

The site and building of the Hospital, valued at about sixty thousand rupees are the princely gifts of BABU RAMRIKDAS HARALALKA.

The hospital building is a three-storied one with sufficiently lighted and airy rooms containing at present about 22 beds and nicely equipped with an out-door dispensary on the ground floor.

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Indian Nurses' Training. The Calcutta Corporation sometime ago formulated a scheme of Indian Nurses' Training limiting the period of training to two years instead of three as prescribed by the State Medical Faculty, Bengal, against oppositions raised by the Calcutta Hospital Nurses' Institute who questioned the efficacy of the scheme and asserted that women of the "desirable" type would not be available. Both the apprehensions have, however, been belied. The seats available at the Buldeodas Maternity Hospital and the Chittaranjan Hospital where nurses are being trained according to the Corporation syllabus are full. A large number of respectable candidates who cannot be admitted for want of accommodation are in the waiting list. The nurses examined by the Corporation Syllabus and Examination Board have been found quite efficient. The candidate who passed the Final General Nursing Examination obtained 90 per cent of marks in the practical.

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New Hospital in Shimoga (Mysore.) On the 20th instant His Highness the Maharajah of Mysore laid the foundation stone of a building at Shimoga to be provided by the Mysore Government as a general hospital.

Three addresses were presented to His Highness one by the Shimoga Municipality, one by the Shimoga District Board and the third by the Senior Surgeon to the Government of Mysore.

DR. S. SUBBA RAO Senior Surgeon giving an account of progress made in the Medical Department during the past half a century said that the number of medical institutions had increased from 230 to 270, the number of in-patients admitted to and treated in the wards annually had increased from 7,000 to 34,000 and the number of out-patients attended to in the hospitals and dispensaries in the State annually had increased from 8 to 32 lakhs.

This expansion of medical relief had made it necessary to construct new and more up-to-date buildings to meet modern requirements. The present building which was to be named after COLONEL MCGANN, the first Senior Surgeon to the Government of Mysore was estimated to cost Rs. 1,30,000. The citizens of Shimoga had already subscribed Rs. 40,000 for the construction of the hospital. DR. SUBBA RAO concluded by saying that it was a matter for greater gratification that COLONEL MCGANN and his wife were still in Mysore to see the fruits of the tree which had been planted half a century ago.

In the address presented to His Highness by the Municipality, improvement of the drainage system of the town and installation of an electric system were asked for.

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Christian Medical College. The All-India Christian Medical Council, which has just ended its

annual session at Allahabad, discussed at length the question of the future site of the proposed £1,000,000 medical college to be established in India with the help of funds raised in America. (*vide* J. I. M. A., Vol. I., No. 3, Nov. 1931, page 111-12).

Allahabad had been provisionally chosen for the site but such a strong case was put up by DR. SCUDDER from the Miraj Hospital that a final decision on the matter has been deferred until funds are raised.

DR. SCUDDER had the written support of many organisations and the cordial invitation of the Chief of Miraj (Senior) as well as of H. H. the Maharaja of Kolhapur and the Chief of Sangli.

The Council decided in the meantime to make an immediate appeal for three lakhs of rupees from America to extend the present medical school at Miraj.

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Institute of Hygiene and Public Health. The building of the All-India Institute of Hygiene and Public Health, is almost completed and it is expected that the working will soon commence.

The primary object of the Institute is "to bridge the gulf between the results achieved by pure research and their practical application." Its function will, however, be primarily that of instruction. The subjects for the Diploma of Public Health will continue to be taught by the staff of the School of the Tropical Medicine, but specialised subjects in Public Health will be taught by the staff of the Institute, each professor dealing with his special subject. The examination for the D. P. H. will be conducted as it is now by the University of Calcutta, to which the Institute will be affiliated. It is intended also to provide short post-graduate instruction in special subjects for public health workers desiring to pursue advanced study, and it is probable that the University will institute a higher degree of Doctorate in the Science of Public Health which will require a year's training in the Institute in some special branch of public health science.

Six sections will be accommodated *viz.* (1) Public Health Administration (2) Sanitary Engineering, (3) Vital Statistics and Epidemiology, (4) Bio-Chemistry and Nutrition, (5) Malariology and Rural Hygiene and (6) Maternity and Child Welfare and School Hygiene.

Considering the importance of maternity and child welfare work and public health nursing it is contemplated that special courses in these subjects may be instituted for women graduates and nurses respectively.

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Smoker's Throat. The fact that a young man from Motala had been breathing through the mouthpiece of a broken pipe which had lodged in his trachea for two years was revealed when, in a fit of coughing, he dislodged the obstruction which had baffled doctors.

He swallowed the piece of pipe when it broke in his mouth in a car collision two years ago. Doctors to whom he complained of fits of suffocation, X-rayed him for inflammation of another part of his throat.

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Blessings of the G. M. C. on the Proposed All India Medical Council Bill ! At the opening of the 134th session of the G. M. C. on Nov. 24th last the President made the following remarks :

Progress has been made in India with the promised legislation of supervising and guaranteeing the standards of Indian Medical qualifications. The Government of India has now forwarded a Draft Bill to constitute an Indian Medical Council with this purpose in view. The Draft Bill has been submitted to the Executive Committee for comment, and the Committee, after consideration, has resolved that the Bill, as drafted, is designed to provide a suitable means of ascertaining and controlling such standards, and of furnishing authoritative information thereon to other countries, including the United Kingdom.

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The G. M. C. President Resigns. SIR DONALD MACALISTER, president of the G. M. C., has resigned his office of president on medical advice. Since his recovery from a serious illness in September last SIR DONALD has found himself unable to stand the strains of the work imposed on the president and hence he announced his aforesaid decision in course of his presidential address at the opening of the 134th Session of the General Medical Council held on the 24th of Nov. last.

SIR DONALD has been connected with the Council for a period now extending over 42 years out of which 27 years he has served as president. SIR NORMAN WALKER has been elected to succeed him.

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Student Studies his Case while Dying. The science of medicine contains no more heroic tale than the life and death of ALFRED SEYMOUR REINHART, a brilliant 24 year old sudent of the Harvard Medical School, who, fully aware that he must soon die, devoted his time to studying his own disease for the benefit of humanity.

Rheumatism damaged one of REINHART's heart valves when he was a boy, but despite this handicap, he worked his way through Harvard and graduated with high honours. Four months ago symptoms appeared which he recognised as fatal.

Isolating himself in a little room in Thorndike Memorial Laboratory at Boston City Hospital, he summed up the results of studies of his disease. This he diagnosed as sub-acute bacterial erdocarditis.

So anxious was he to produce a useful record that he refused drugs until the very last, despite almost unbearable pain, in order the better to describe the effects of the malady. "It is modestly hoped," he wrote, "that here and there in these notes there may be a statement of value in the elucidation of some medical problem involving the psychology of the sick-room."

REINHART once described the agony he endured as equal to that suffered by six women in child-birth. He was writing notes four days before his death, and he directed that a post mortem examination be made.

DR. WEISS, Professor of Medicine at Harvard declared that REINHART's predictions as to what the post-mortem would disclose had been fulfilled. The notes, he said, contained unusual observations, not generally known to medical science. They will be published posthumously as a lasting tribute to the martyr.

Medical World, Dec. 25, 1931.

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Echoes of Luebeck Serum Tragedy. PROFESSOR DEYCKE by inoculating himself with the serum which is alleged to have killed 76 children at Luebeck, has taken the Spartan means of providing proof of his contention that the deaths of the children were due to a mistake. (for details see Indian Medical World Vol I, Nos. 5, 6 and 12).

He inoculated himself with two kinds of CALMETTE serum, one obtained from children still suffering from the effect of the inoculation and the other taken directly from the laboratory. X-ray photographs show that the reaction from the children's serum is much stronger than that from the laboratory serum.

Expert witness declares, however, that both serums are indentical, whereas after the deaths of the children it was suggested by PROF. LUDWIG LANGE of the Reich Health office in concurrence with PROF. NEUFELD of Berlin and DR. KIRCHNER of Hamberg that virulent tubercle bacilli had accidentally got mixed with the CALMETTE cultures and that the deaths of the childern were not to be attributed to the CALMETTE process as such. Doctors are anxiously watching PROF. DEYCKE who is quite sure that the serum is harmless.

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Combating the foreign influx in France. France is faced with the serious problem of having an overcrowded medical profession. From 1900 to 1922, the number of physicians rose from 16,115 to 27,500 whereas the population increased only 2,00,000.

The French Academy of Medicine recently appointed a Commission to study the overcrowding of the medical profession in France. This Commission has come to the conclusion that this overcrowding is really due in great part to the ease with which foreigners can obtain a medical degree in France.

Based on this recommendation a bill has been introduced in the Senate by Senator DR. DENTU, who holds that the first remedy naturally consists in withholding from foreigners the ready facilities that are offered at present to practise medicine in France. It is not a question of prohibiting them from practising medicine but simply of demanding of them the same preparation that is demanded of French physicians. It is proposed in this bill that any foreigner who wishes to practise medicine in France must first be naturalised and that, in order to secure the government diploma, which alone confers the right to practise medicine, "equivalent studies" shall no longer be accepted in place of certain studies in the French course leading to the degree as in the past. Further more, the transformation of the university diploma into a government diploma, a privilege that is too readily accorded to foreigners under pressure brought to bear by their ambassador, will not occur except under strict guarantees. It is said that there was no thought of restricting the traditional hospitality of French universities. The purpose is solely to make a distinction between foreign students who return to their own country after obtaining a university diploma and those who have come to settle in France to practise medicine.

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Child Without Thyroid Gland. The case of a nine months old girl born without thyroid or thymus glands was revealed at a Paddington inquest. The girl died from heart failure due to congenital myxoedema accelerated by pneumonia. The child was being treated at Great Ormond Street Hospital with a thyroid extract.

It was stated to be a very rare thing to find a case of this sort

Medico-Legal

Patient's Death on Operation Table.

JOHN NORONHA (33) an engine driver of the G. I. P. Railway was admitted into the Railway Hospital at Byculla on November 13, for treatment of enlarged tonsils and died whilst under chloroform prior to operation.

Four witnesses gave evidence at the inquest held by the Coroner of Bombay. One was a relative of the deceased whilst the others were DR. F. B. AMBLER, District Medical Officer, G. I. P. Railway, DR. B. FERNANDEZ, an assistant in the Railway Hospital and MAJOR S. B. MEHTA, Officiating Police Surgeon. MAJOR MEHTA was called to help the Court in the inquest, and gave his opinion on the evidence, which was recorded also. The official post-mortem examination report by the assistant to the Police Surgeon which was also placed on record showed that "death was due to asphyxiation owing to persistent thymus and enlarged tonsils blocking the air passage."

DR. BENEDICT FERNANDEZ, the assistant of the Hospital, who had administered the chloroform said that on being admitted on November 13, the patient NORONHA was thoroughly examined. His heart at the time was found to be perfectly normal. Witness stated that his examination "led him to conclude that the patient was in a fit condition for operation. Another examination of the heart was made the next day, when also the heart was found to be satisfactory." That day, at 2-55 p. m. NORONHA was taken to the operation theatre. On the patient asking him to examine his heart again, he did so and again found the heart in a sound condition. Witness then gave him the anaesthetic. Starting with two ounces of choloroform, witness said the patient received about ¾ ounce. He was boisterous during the first stage, and about four minutes later, witness noticed the patient's face to be slightly blue. He stretched his limbs, and the fingers began to twitch, while his respiration ceased. DR. AMBLER, who was present from the very beginning tried artificial respiration to NORONHA, but the response was feeble. Artificial respiration was continued for one hour, after which it was given up. At 4 p. m. all treatment was stopped because there was no response to it.

Witness said that he did every thing under the personal supervision of DR. AMBLER. He had 11 years' experience as a medical man, and had administered chloroform to at least 3,000 patients during that time.

Replying to questions put by the defence counsel witness said that the operation for which the patient was admitted was a minor one. Throat operations sometimes caused haemorrhage. He did not think that any special previous treatment to prevent haemorrhage was necessary. The tonsils were moderately enlarged, and under chloroform, tonsils would sometimes enlarge. Witness personally put the two ounces of the anaesthetic in the inhaler. The collapse of the patient was very sudden. Death was due to failure of respiration.

DR. FRANCIS BARLOW AMBLER, District Medical Officer of the G. I. P. Railway, next gave evidence. He said that he first saw NORONHA on November 12, when he told him that he would admit him as an in-patient, as the latter wanted his tonsils to be removed. He was admitted the next day. As NORONHA complained of chronic sore throat, witness deemed it advisable that he should have the tonsils removed. He instructed DR. FERNANDEZ to prepare him for the operation, and on November 14, at about 3 P. M. he was placed on the table. DR. FERNANDEZ, who had examined the patient's heart, administered chloroform, whilst witness was watching the process. NORONHA struggled for some time and subsequently stopped breathing. Chloroform was then stopped. Everything necessary to revive respiration was done, with the assistance of four qualified medical men, but life was extinct at 4 P. M.

MAJOR MEHTA who attended the inquest to assist the Court said that he was satisfied "that every thing needed to be done in the administration of choloroform had been done with the necessary care".

The jury expressed themselves as satisfied that death had been due to a natural cause—asphyxiation owing to persistent thymus and enlarged tonsils, blocking the air passage.

Alleged Mishandling of Delivery Case.

KING EMPEROR *Vs.* NAIDU

MR. P. C. LOBO, District and Session Judge, Guntur, pronounced judgment on November 29, 1931, in a case in which one S. VEERASWAMI NAIDU, an unregistered medical practitioner of Repalle, stood charged under Sections 302 and 304 of the Indian Penal Code.

The prosecution case is briefly as follows :

One V. ANJAMMA of Vari Kutivaripalem near Repalle had delivery pains on the morning of the 4th June last. Two mid-wives who were called in said that they could not handle the case as hand of the child in the womb had come out. Thereafter the accused was brought from Repalle and he cut off the hands of the child that protruded from the external genitals of the woman and in so doing he caused injuries

to the bladder and uterus of the mother. After unsuccessful attempts to effect the delivery of the child first at the patient's house at Vari Kutivaripalem and then at his own dispensary where the accused had directed ANJAMMA to be brought, the accused advised that ANJAMMA should be taken to Guntur Hospital. She was delivered of a dead child at the Government Head Quarters Hospital at Guntur, with its hands cut on the evening of the 4th June. The mother died on the following day.

Sixteen witnesses were examined for the prosecution. The two mid-wives, spoke to their having seen the accused cut off the hands of the child in the womb. The Assistant Superintendent of the Hospital, deposed that he had attended to the delivery of ANJAMMA and that, in his opinion, the child had died as a consequence of the cutting of its hands and that the injuries caused to the mother were sufficient in the ordinary course of nature to cause her death.

No witnesses were examined for defence, but it was contended that the guilt or otherwise of the accused under Section 302, I. P. C., for the murder of the child in the womb depended upon the determination of the question whether the child in the womb was alive or dead at the time its hands were cut off, that the evidence of the prosecution on the point was inconclusive and that, therefore, the accused was entitled to the benefit of doubt. As regards the second count, it was suggested that the injuries to the mother might have been caused by the manipulation of the hands of the country mid-wives who might have rudely handled the case and by their mishandling and bad manipulation caused the injuries.

All the assessors expressed it as their opinion that the accused was not guilty on both the counts for the reasons mentioned.

The learned Judge agreeing with the assessors acquitted the accused.

Obituary

Dr. Tarak Nath Sur.

DR. TARAK NATH SUR, M. D., officiating Professor of Pathology at the Calcutta Medical College, died of heart failure at his house on Thursday the 7th January last. His numerous relatives, friends, professional brethren as well as students of the Medical College attended the funeral.

DR. SUR passed the L. M. S. examination of the Calcutta University in 1905 and in 1918 obtained his M. D. (Cal.) He was a great scholar and a popular figure in Calcutta. He had a charming personality characterised by sweetness of temperament, suave manners and frankness.

We convey our heartfelt condolence to the bereaved family.

Dr. Miss Y. Sen.

The death took place on Thursday, the 21st instant of DR. (MISS) YAMINI SEN, F.R.C.P.S. (Glasgow and Dublin), D.P.H. (Cambridge), at Calcutta. The late MISS SEN graduated from the Calcutta Medical College in 1897. Ever since she had a distinguished career. She spent several years in Nepal where she was in charge of the Women's Hospital at Khatamundu and acquired an extensive practice. For reasons of health she retired from the service in Nepal in 1907.

In 1910, she went to England and obtained the F.R.C.P.S. (Glasgow and Dublin). On coming out to India, she joined the All-India Women's Medical Service in 1912 but resigned her job in 1921, and proceeded to England a second time in 1922 and qualified herself for the Diploma of Public Health at Cambridge University. Returning to India in 1923 she joined the Baldeodas Maternity Home under the auspices of the Calcutta Corporation. As lady doctor in charge of that institution she discharged her duties with conspicuous ability till 1930. Her health in the meantime had completely broken down and she decided to retire. For the last two years she had been living at Puri with the intention of recouping her health. The local zenana hospital was badly in need of a lady doctor, and the District Magistrate knowing the qualifications of MISS SEN, persuaded her to take charge of the hospital.

MISS SEN leaves behind a host of relatives, friends and admirers to mourn her loss.

Medical Associations, Societies, etc.

Medical Societies, Associations, Unions etc. are invited to make use of this Section of the Journal. —EDITOR.

The Indian Ambulance & Red Star Society.

A meeting of the promoters of the Indian Ambulance and Red Star Society was held on the 14th December 1931, when the following members were unanimously elected to the Executive Council of the Society.

President.

Dr. G. V. Deshmukh.

Vice Presidents.

Sir Hormusji C. Dinshaw, K. R. P. Shroff, Esqr., Dr. Jivraj Mehta, E. R. Hirjibehdin, Esqr.

Hon. Secretaries.

Dr. K. K. Dadachanji, Dr. Sorab J. Popat, Dr. M. V. Parulkar, Dr. P. P. Katrak.

Hon. Treasurers.

Dr. Sorab J. Popat, Dr. J. D. Dhruva.

Members.

Kaikobad C. Dinshaw, Esqr., J. P., Dr. (Mrs) D. J. R. Dadabhoy, Dr. M. D. D. Gilder, Dr. (Mrs) Hirabai M. Gilder, Dr. (Miss) Jarbanu E. Mistry, Dr. N. A. Purandhare, Dr. A. S. Erulker, Dr. P. T. Patel, J. S. Chiniwalla, Esqr., Advocate, Dr. J. V. Vora, Dr. J. N. Sayani, Dr. S. M. Khambatta, Dr. C. R. Athavale, Dr. P. V. Dhebri, Dr. C. H. Kotak, Dr. C. N. Shroff, Dr. R. V. Sanzgiri, Dr. V. P. Kamat, Dr. D. T. Anklasaria, Dr. N. H. Vakil, Dr. F. S. Contractor, M. Laud, Esqr., M. R. Patel, Esqr., D. F. Kharas, Esqr.

All Bengal Compounders' Association.

3RD ANNUAL GENERAL MEETING.

The following resolutions were passed at the 3rd Annual General Meeting of the All Bengal Compounders' Association held on the 27th December 1931.

1. This meeting of the All Bengal Compounders' Association confirms the resolutions* No. 1, 2, 3, 4, 5, 6, & 7 which were unanimously passed in the last general meeting of the Association and demands that the local Government and other authorities concerned with the interest of the compounders shall pay due heed to those resolutions.

2. That in the last General Meeting of the All Bengal Compounders' Association a resolution was passed requesting the Local Government and the Corporation of Calcutta to enquire if any unpassed compounder works in the capacity of a compounder in any pharmacy or dispensary. This meeting expresses its deep regret as the said authority have not given any heed to the request.

3. That in the 15th column of the B. C. M. D. form No. 778 and in the financial column of the same form No. 798 of the Government Medical Department, the compounders have been classified as the inferior servants. This meeting strongly protests against such classification and requests the Government to change it and place them in the separate column called Medical Assistants.

4. That referring to the fact that two compounders namely Babu S. C. MUKHERJEE and Babu M. R. BHATTACHARJEE serving in the Belgachia Veterinary College Hospital for 18 years and 3 Years respectively having been dismissed for no offence of theirs the Executive Committee of the All Bengal Compounders' Association appealed to the Government to appoint a Committee for due enquiry but to no effect, so this meeting expresses its deep sympathy with the sufferers and requests the Government to protect these poor compounders in their distress.

5. It is resolved that a School of Pharmacy should be started by this Association in which training of Pharmacy will be provided to the passed compounders. A Board of Directors with some eminent physicians of Calcutta will be formed soon and according to this resolution they will do the needful for the school.

* The following are the resolutions in reference, which were passed at the 2nd General Meeting of the All Bengal Compounders' Association held on the 28th December, 1930.

1. Resolved that the meeting requests the Local Government, District Boards, Municipalities, Railways and other authorities to manage a holiday for the compounders every week.

2. Resolved that this meeting requests the Local Government to legislate that the working period of the compounders be not more than 7 hours a day.

3. Resolved that this meeting requests the Local Governments to legislate that the appointment and dismissal of the compounders of the Government hospitals and dispensaries go to the hands of the Surgeon General with the Government of Bengal and their services be transferable.

4. Resolved that this meeting draws the attention of the Local Government to the fact that the free-quarters provided to the compounders of the Government hospitals and charitable dispensaries consist in most cases of one bed-room and one kitchen only which are not at all suitable at least in the eyes of morality. So this meeting requests the Local Government to manage that the free-quarters provided to each of these compounders contain at least two bed-rooms, one drawing-room and a kitchen.

5. Resolved that the initial pay of a compounder should be Rs. 50/- and should culminate in Rs. 120/- with a biennial increment of Rs. 5/-. So this meeting draws the attention of all the authorities to the above resolution.

6. Resolved that the syllabus of training of compounders should be so changed that the compounders may get an elementary knowledge of diagnosis and treatment of diseases during their two years' course of study.

7. Resolved that this meeting requests the Local Government to adopt a policy that the unpassed compounders are not allowed in private pharmacies and dispensaries to act in the capacity of a passed compounder.

Book Review

Proceedings of the Celebration of the three hundredth Anniversary of the first recognised use of Cinchona.

The report of the proceedings is a valuable contribution and should be of considerable interest to all medical men interested in the use of cinchona as a remedy for malaria. The history of the discovery of cinchona and its first use in medicine in 1630, its subsequent uses commencing from the Duchess of Cinchona, wife of the Viceroy of Peru, and endeavours that were made to grow the plant, the early failures and disappointments followed by the crowning success in India and Java, read almost like a romance. Apart from the historical aspect, it contains some valuable scientific contributions which will be read with pleasure and profit. The articles regarding the chemistry of cinchona historically considered by EDWARD KREMENS, the medical use of cinchona by GEORGE DOCK and the cinchona alkaloids in medical science by TORALD SOLLMANN deserve special mention.

B. N. G.

Association Notes

Poona Branch

SECOND ANNUAL REPORT

1-12-30—30-11-31.

The year under review was marked more by constructive work than by any outward progress of the branch. The outstanding event of the year under review was the 7th Session of the All-India Medical Conference in Poona.

The session of the conference lasted for three days commencing on the 25th April, 1931 and ending on 27th April, 1931. Besides scientific papers and discussions on questions referring to the profession, various other items of entertainment and excursions were arranged by the Reception Committee and were highly appreciated. An exhibition of medical products and appliances was also organised in connection with the conference and twentyfive companies exhibited their products. The exhibition was largely attended. The conference was unanimously reported as a huge success. We think that it is a matter of pride for the Poona Branch to have organized such a huge conference, in view of the fact that the branch itself is still in its infancy. All the medical practitioners in Poona without a single exception joined wholeheartedly to make the conference a success. It proved one thing beyond doubt that the Poona medical practitioners are capable to materialise an organized action in the interest of the profession. We take this opportunity to convey our sincere thanks for the wholehearted support and sympathy, which we received from all our medical brethren, particularly those who were our colleagues in the various sub-committees, as also to the various institutions and individuals who rendered us every possible assistance monetary and otherwise.

The Managing Committee: The officebearers of the Managing Committee were the same as last year with the addition of DR. (MRS) SITABAI KIRTANE, as the lady member. The Managing Committee held in all seven meetings during the year, besides those held in connection with the conference. The attendance of the meeting was very good and business, more or less of a routine nature was transacted.

Laboratory: The following report has been received from DOCTORS A. R. SANE, M. B., B. S., and M. N. NATU, B. SC., M. B., B. S., in charge of our laboratory :

The Clinical Laboratory was started from the 1st of January 1931 with an idea to popularise clinical investigation and to bring it within the reach of all classes of patients. A sliding scale of fees is prepared and it is settled that specimens are to be examined free when so recommended by the members.

About three hundred rupees have so far been spent buying the necessary apparatus and materials. DR. SAHASABUDHE has kindly lent his miscroscope and some materials to the laboratory. Sixtynine specimens have so far been examined. It is hoped that members will take greater advantage of the laboratory.

We join our colleagues working at the laboratory in their appeal to the profession in Poona to take advantage in a greater measure of the facilities offered to them by the establishment of the laboratory and we trust that our appeal will not be in vain.

General Body: The General Body held two meetings during the year.

Reading Rooms: At a meeting of the Managing Committee held on the 15th September 1931, it was resolved on the motion of DR. A. K. NULKAR, L. M & S., to start a reading room of the branch with a few medical journals at the beginning and organize it into a circulating library and a reading room. With this end in

view the following journals were ordered for the half year commencing 1st of July 1931 :

(*a*) Lancet, (*b*) International Medical Digest, (*c*) Practitioner, (*d*) Indian Medical Gazette and (*e*) Medical Annual 1931. The journals have only recently begun to arrive and necessary arrangements for the reading room are being made.

Other Activities : 1. A lecture on "Faraday Centenary" was arranged by the branch in collaboration with the Ranade Memorial Institution and was held on 2nd October, 1931 at 5 P.M. in the hall of the Maharastra Education Society The principal speakers on that day were DR. M. V. APTE, B.Sc., M.B., B.S., and Prof. S. K. APTE of the Engineering College. The lecture was highly appreciated by the general public and such lectures should be held in future as occasions arise.

2. The Draft Bill of Medical Education and Registration was discussed by the Managing Committee and considered opinion of the Committee has been forwarded to the Central Council for necessary representation being made to Government. We have every hope that the bill if amended in the necessary direction will be a great boon to the profession. In this connection we have to mention that the Government of Bombay should be approached to recognize our Branch officially so that in future they will ask for our opinion on any matter of medical interest.

3. The publicity work of the Branch has not yet been pushed forth as much as we wish it to be, mainly because, we did not get enough of material to be published in lay-press. We have, however, every hope that members will in future take keener interest in this line of activity and help us in educating the general public on matters medical.

Finances : During the year under review the total number of members was 59. This shows an addition of nine members to the membership list. Two of our members have left Poona during the year thus bringing up the total number of members to 57.

The financial statement giving the details of accounts of the branch has been duly audited by the auditor appointed by the Managing Committee.

Bengal Branch.

CLINICAL MEETING.

"The Role of Rontgen Rays in the Diagnosis of Certain Diseases in Children" was the subject of a lecture delivered by Dr. K. C. CHOUDHURY, M. B. (Cal), on 22nd December, 1931 under the auspices of the Bengal Branch of the Indian Medical Association.

The subject was confined to diseases of the bones only and was profusely illustrated by lantern slides prepared from X'ray photographs. In most cases the slides depicted the progress of cases during and after treatment.

In introducing the lecturer, Dr. A. C. UKIL said that during his stay in the continent the lecturer had devoted the whole of his time in studying diseases of children and had worked under the guidance of such eminent professors as Prof. C. STERNBERG, Prof. E. NOBEL, both of Vienna and Prof. W. BIRK of Tubingen, and was therefore in a position to speak with some authority on the subject.

At the conclusion of the lecture several members took part in the discussion and a few questions were also put to the speaker for elucidation.

Dr. D. N. BANERJEE, M. B. (Cal), M. D. (Berlin), presided.

"AT HOME."

The members passed a very enjoyable social evening on the 28th December last when they met Major M. G. NAIDU from Hyderabad at a tea party in the Association Rooms. The attendance was large and the members made good use of the opportunity afforded for the exchange of ideas both among themselves and with the guest of honour.

Major NAIDU came to Calcutta to attend a meeting of the Central Council which was held to consider the Indian Medical Council Bill.

Central Council.

The XVIII meeting of the Central Council of the Indian Medical Association was held on the 27th and 28th December, 1931 to consider primarily the Indian Medical Council Bill.

Members present :

MAJOR M. G. NAIDU, SIR NILRATAN SIRCAR, DR. B. C. ROY, CAPT. P. B. MUKHERJI, DRS. N. N. BASU, K. S. RAY, A. N. GHOSH, K. C. CHAKRAVERTY, A. C. UKIL, SANTIRAM CHATTERJI, J. N. MAITRA, S. M. DAS, S. C. SEN GUPTA, A. D. MUKHERJI and SITAL CHANDRA DUTT.

MAJOR M. G. NAIDU was voted to the chair.

DR. JIVRAJ N. MEHTA, the President of the Association, intimated his inability to attend the meeting as he had just arrived in Bombay from England. The Council conveyed their heartiest welcome to DR. MEHTA on his return to India and resolved that the draft as approved be sent to DR. MEHTA for his suggestions.

The draft letter in reply to the Government letter No. 1494-H of the 31st August, 1931 and the amendments to the Bill were submitted and

considered by the Council who accepted the draft with certain amendments.

Regarding the venue of the next conference it was resolved that the Secretaries be requested to ascertain if Bombay is willing to send an invitation to organise the next annual conference there, and if no decision could be arrived at regarding Bombay as the venue, within a fortnight it was decided that the conference should be held in Calcutta.

It was further resolved that the conference be held at the end of February or in the beginning of March 1932.

Regarding the selection of Presidentship, resolved that the names nominated by the branches and by the members of the Central Council be tabulated and re-circulated and opinions invited for the final selection of the President within 10 days from the receipt of the notice.

The following motion to which due notice was given by DR. RAMA KAMATH was then discussed :

"That a Committee consisting of 2 representatives from each province be deputed to be at Delhi at the time when the proposed Bill comes for discussion before Legislative Assembly to canvass opinion in favour of the amendments which are passed finally by the Central Council of the Indian Medical Association and of the 2 representatives from each province—let one be a licentiate and the actual expenses of the journey of the members of his Committee be met with by the funds of the Indian Medical Association, if possible."

It was resolved that the suggestion could not be entertained as the funds at the disposal of the Central Council will not permit to bear the heavy expense that it would involve.

It was further resolved that the members of the Central Council should be requested to canvass the members from these respective provinces to support the amendments of the I. M. A. with regard to the Indian Medical Council Bill.

Read a letter from DR. K. K. DADACHANJI regarding convening an All India Medical Conference in Bombay in the middle of January 1932 to consider the Indian Medical Council Bill. Resolved that DR. K. S. RAY be requested to write to DR. K. K. DADACHANJI intimating him that the Central Council of the I. M. A. has already come to final decision regarding the amendments of the Bill in question and suggests that DR. DADACHANJI should get in touch with DR. JIVRAJ N. MEHTA, the President of the Association regarding this matter.

With regard to the suggestion of DR. JIVRAJ MEHTA about a deputation to be sent to the Hon'ble Member in Charge of Department of Education, Health and Lands, on the subject of the Indian Medical Council Bill it was resolved that DR. JIVRAJ MEHTA and DR. K. S. RAY be requested to do the needful in the matter.

Recommendations of the Central Council of the Indian Medical Association on the Proposed Indian Medical Council

From

The Joint Hon. Secretaries,
Indian Medical Association.
67, Dharamtala Street, Calcutta.

To

A. B. Reid, Esq., I. C. S.,
Offg. Secretary to the Government of India.
Education, Health & Lands Department,
Simla.

Dear Sir,

We are directed to address you in reference to your circular letter No 1494-H dated the 31st August 1931, regarding the establishment of an Indian Medical Council, and to place before you for the consideration of the Government of India the considered views of the Indian Medical Association on the subject of the Bill.

2. Before proceeding to record the views of the Association, we may be permitted to remark that in a measure of such importance much greater opportunity than has been allowed should have been given to public bodies for consideration of the Bill.

3. It would perhaps be helpful to state that the Indian Medical Association is the organisation which was formerly known as the All-India Medical Association. It has branches throughout India and with it is affiliated a number of similar institutions in the different provinces. Its membership includes University Graduates as well as Licentiates and on its roll are members of the independent medical profession as well as medical officers serving under Government or Local Boards. The expression of opinion on the Indian Medical Council Bill expressed in the following paragraphs thus represents the considered opinion of the medical profession throughout the country, and would, therefore, we trust, receive the weight before Government formulate their final proposals for submission to the Legislative Assembly.

4. In regard to paragraph 2 of the letter above mentioned, the Association considers it unfortunate that at the Simla Conference of June 1930 no opportunity was given to the independent section of the medical profession in India as such, (who stand to be most affected by the provisions of the Bill under contemplation, and who in fact form the vast bulk of the medical profession in this country) to send a direct representation to the Conference and to place before it the views of this large section. As the main object of establishing an Indian Medical Council is, as was resolved at the Simla Conference, "to put our own house in order and to establish a minimum uniform standard of qualifications for India and to promote co-operation among the universities,"

the constitution of the Council must be primarily orientated to this purpose. The report of the discussion at the Conference shows that the members desired an *independent* and self-contained Council with a large preponderance of persons who have an academic outlook and are connected with teaching. It is surprising to note that the report gives no reason why the members considered that in an independent Council of 28 members there should be 12 persons directly representing the Government. It is equally strange why it was considered essential to let each provincial Government (even the Government of Central Provinces, which have no direct interest in imparting instruction to medical graduates) have a direct representation on the council. The Association is emphatically of opinion *that the Provincial Governments need have no direct representative on the Council.*

5. The essential purpose of such a Council, in the opinion of this Association, should be :—

(1) To control the standard of medical education and professional qualifications, with a view to assuring that the medical practitioners possess the necessary knowledge and skill for their professional work ; and

(2) To assure the maintenance by registered medical practitioners of the high standard of professional conduct and rectitude.

The active co-operation of such a Council may also be secured in the recruitment for public medical services by means of open competitive examinations, as also in regard to the conduct of medical research, in the compilation of a Pharmacopoeia and other functions for the general benefit of the profession as well as of the country. These features should be clearly indicated in the Objects and Reasons of the Bill.

Composition of the Indian Medical Council.

(a) President.

6. The only reason adduced as to why the President should be nominated by the Governor-General-in-Council is that "of the close association which should exist between the Council and the Central Government". In the opinion of the Association, the Council, if it is to function as an independent body should elect its own President. In view of the fact that the proceedings of the Council will be subject to confirmation by the Governor-General-in-Council, the President who is the chief spokesman of the Council, should not be a person nominated by the Governor-General-in-Council. It may be mentioned that the first Medical Council formed in England in 1858 had the right to elect its President ; the Privy Council of which the Medical Council was an agent by statute, did not claim the right to nominate the President. There appears to be no valid reason why the Governor-General-in-Council should be given this power of nomination. Accordingly, this Association is opposed to granting power of nomination of the President of the Council to the Governor-General-in-Council either perpetually or at the inception of the All-India Medical Council.

(b) One member to be nominated by each Local Government.

7. In the view of this Association, the interests of the Local Government or of the Indian Medical Council would not be best served by this method. They would, however, provide for connexion between the Council and the Provincial interests by the election of a representative to the Council from the Provincial Committees to be constituted in the manner recommended in paragraph 13 below.

(c) One member elected by the Medical Faculty of each University in India.

8. In paragraph 5, the issue is raised *whether each University in a province, with a medical faculty, should have separate representation on the Council or whether the Universities in a province should be grouped together for the purpose of electing one representative between them.* While this Association agrees that the Council should not be rendered unwieldy, it considers it essential that the Universities having medical faculties should be separately represented. It will be realised that such institutions are primarily responsible for the establishment and maintenance of standards of medical education in the different parts of India and for this important reason each such University should be allowed representation. In view of the fact, however, that certain medical faculties are too small to act as a suitable electorate the Association proposes that the election of the representative of the University, should lie with the Senate. This method has the additional advantage in that the responsibility for election is placed on the real body entrusted in each University with the control of higher education and the conduct of examinations.

(d) One member to be elected by the medical graduates of each province in which there is a medical register.

9. On the question whether graduates should have any direct representation or whether Provincial Medical Councils should elect one person on the Council (Paragraph 6), it will be realised that one of the functions of the Council will be to enter in the Register or to erase from it, for professional misconduct, the names of graduates. Therefore it is reasonable that the graduates should have someone to represent their interests. From this point of view, the British Medical Act of 1886 gave representation to registered practitioners. The same argument applies with equal cogency to the Indian Medical Council.

10. With regard to the qualifications of graduates prescribed under clause 5 (3) of the Bill, it is felt that restriction to those with teaching experience of at least 5 years in a medical college affiliated to a British Indian University would, in effect and for many years to come, invariably amount to the seat going to an official member from the graduate constituency as, except in the case of only two institutions in the country, all the others are staffed by Government servants, who only would possess the requisite qualification. If the graduates are to be truly represented, the qualifying clause *viz.* Section 5 sub-section (3) requires to be deleted.

Inclusion of Licentiates.

11. As the Association is of opinion that the Licentiate Group forms the largest section of the medical practitioners in India and on them devolves the major portion of work of rendering medical aid to the masses, no Indian Medical Council would be adequately constituted if this very large element is left unrepresented on it. It was a somewhat similar consideration that led to the inclusion of representatives of the dental profession in the British Medical Council. If the primary and main object of the Council is to establish uniformity of minimum standards in India and not merely to seek recognition of Indian Medical degrees by the General Medical Council of Great Britain, then it becomes increasingly evident that the Licentiates require to be brought within the purview of the Bill and given adequate representation. The inclusion of the Licentiates in the Indian Medical Council will help in raising the standard of their education, by insisting on the improvement of the curriculum and equipment of their schools and particularly in strengthening the quality of their teaching staff. The Association recommends that the Licentiate Group in each province should be allowed one representative each in the Council.

Reciprocity.

12. On the question of reciprocity, this Association is emphatically of opinion that the Council should be free to accept the medical degrees of those countries only which accord the same privileges of recognition to the medical degrees of Indian universities and whose standards of medical education and examination are in no way less than those that may from time to time be prescribed by the Indian Medical Council when established. It is not in keeping with this intention, therefore, that British degrees should be

automatically recognised by inclusion in the First Schedule of the Bill. This question is essentially a matter for reference to the Council after its formation.

13. With reference to paragraph 8 of the Government of India's letter under reply, the Association is in general agreement with the view expressed therein. They would, however, remark that the Provincial Medical Councils are also important provincial bodies concerned with the maintenance of standards of medical qualifications ; it is also noted that your Government consider it desirable, as suggested in paragraph 6 of your letter "that the link between the provincial boodies and the Council should be close." In order, therefore, to ensure this, the Association propose that the Provincial Committee proposed in Section 11 (1) should be composed as follows :

(*a*) The members of the provincial medical Council.

(*b*) Representative of the university in that province elected to the Council.

(*c*) (*i*) Representative of the graduates of Indian universities.

(*ii*) Representative of the licentiates in the province elected to the Council.

(*d*) The member nominated to the Council by the Governor-General-in-Council from the province, if any.

Fees.

14. With regard to the question of fees, our Association favours the view that fees might be charged, provided that the figure is not prohibitive. It will be realised that the inclusion of Licentiates would provide a large sum towards the maintenance of the Council. This would permit of a substantial reduction in fees from the figure of Rs. 75/- which has been suggested. A fee of about Rs. 25/- should suffice.

Privileges.

15. It is necessary at this juncture to draw attention to a serious omission in the Bill. Apart from the question of benefit in status in registration it is essential that certain definite privileges ought to be allowed to those who register, and thus subject themselves to a strict discipline. It will be noted as against the responsibilities laid on the medical practitioners in all countries, where Medical Acts of more or less a similar nature are in force, that they are allowed certain rights and privileges. For example, no medical practitioner can be appointed in the Military or Naval or Air Force Medical Services of the country or to any civil medical post under Government whether central or local or under any local authority, or to any hospital or dispensary, or on ship registered in the country or plying in territorial waters, unless he is a registered medical practitioner, that is, unless his name appears on the Medical Register of the country. Likewise, no medical certificate is legally valid unless it is signed by a registered medical practitioner, nor will his evidence in giving medical opinion be accepted in a Court of Law. Dangerous drugs or poisons are also not allowed to be administered by a practitioner unless he is registered. A medical practitioner would also not be entitled to administer anaesthetics, or recover any charge in any Court of Law for any medical or surgical advice, attendance, or for the performance of any operation, or for any medicine which may have been prescribed and supplied, unless he is registered under the Medical Acts of the country, nor would any person be protected in charges of manslaughter, in the case of persons dying under their treatment, unless registered.

16. It will thus be seen that the Medical Acts in all countries supervise the medical education and qualifications and lay onerous responsibilities on the medical profession in respect of professional conduct of a high order. In return for such demands, the medical practitioners are protected and privileged in various ways indicated above. Unless such protection was afforded, it would hardly be worth while being on the Medical Register. In the Indian Medical Council Bill as circulated, there is, however, an entire absence of any reference to the privileges or immunities or protection of the kind described above which medical practitioners are assured under similar Acts in other countries. This omission cannot be a mere oversight, as reference to these privileges was included in the corresponding Bill circulated by the Government of India in 1928. Another striking omission in the Bill, as it stands at present, makes it possible for any foreign national to settle in India and to do what he likes in the country in the say of professional practice without any restriction and without having to observe any discipline under the Indian Medical Council. He may even obtain service under the Indian Government, without being registered in the country, if the medical advisers of the Government were inclined or induced to push his claims. This omission in the Bill will also need to be rectified. We would, therefore, suggest that the Bill be so amended that unless a medical practitioner has his name entered in the Indian Medical Register, he will not be allowed the privileges already referred to above and, others of a similar nature. The effect of this amendment would not be to exclude any non-Indian simply because he is a non-Indian to practise or serve in India. It simply requires every medical man in India, whether Indian or non-Indian, desiring these privileges, to conform to the discipline and regulations of the Indian Medical Council.

17. With these preliminary remarks we would now refer you to the annexed statement in which the Association proceed to record their opinion on the various clauses of the Bill and to offer suggestions as to the manner in which the Bill should be altered.

In conclusion, we may hope that the Government of India will give due regard to the recommendations of this Association, which as indicated before represent the views of the independent medical profession in India, the largest element in this country, whose interests are so closely involved in the measures proposed.

We have etc.,
D. D. SATHAYE.
A. N. GHOSH.
K. S. RAY.
Joint Hon. Secretaries.

Amendments, Additions and Alterations proposed by the Indian Medical Association.

The word "British" to be deleted wherever it occurs in the Bill.

Preamble.

Whereas it is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioner and so to provide for the maintenance of a Register of qualified practitioners of modern scientific medicine in order to establish a unifrom minimum standard of qualifications in medicine for all provinces such that persons attaining thereto shall be acceptable as medical practitioners throughout India ; It is hereby enacted as follows :

Short title, extent and commencement.

Section 1. No alteration.

Definitions.

Section 2. No alteration.

Constitution and composition of the Council.

Section 3 and the following section should read as follows :

Section 3. (1) After the passing of the Act the Medical Council in India shall consist of the following members *viz* :

(*a*) Three persons to be nominated by the Governor-General-in-Council ;

(*b*) One person to be elected by the Provincial Committee from amongst members who have been elected to this body ;

(*c*) One person to be elected by the members of Senate or University Court of an Indian University with a Medical Faculty ;

(*d*) One person to be elected by the medical practitioners resident in a province in India and registered in a Provincial Medical Register and who possesses any qualification, granted or recognised by an Indian University or who possesses any recognised medical qualifications under amendment of Section 18 of this Act ;

(*e*) One representative of Licentiates registered in each provincial Medical Register.

(2) No act done by the Council shall be questioned on the ground merely of the existence of any vacancy in or any defect in the constitution of the Council.

(3) The President of the Council shall be elected by the members of the Council from amogst themselves.

Mode of election.

Section 4. (1) An election under clauses (*b*), (*d*) and (*e*) of sub-section (1) of Section 3 shall be conducted by the Provincial Medical Council concerned and an election under clause (*c*) of sub-section (1) of Section 3 by the senate or university court of the Indian University concerned in such a manner as may be laid down by regulations prescribed for the purpose by the Council under section 24 provided that the first election under the Act, will be held in accordance with instructions to be issued by the Governor-General-in-Council on this behalf.

(2) When any dispute arises regarding any election to the Council, it shall in the first instance be referred to a Court of Competent Civil Jurisdiction in the area, and an appeal shall lie to the Governor-General-in-Council whose decision shall be final.

Restriction of nominations and elections.

Section 5. (1) Save as regards the Council as first constituted under the Act no person shall be eligible for election under clauses (*b*), (*c*), (*d*) and (*e*) of sub-section (1) of Section 3 unless he is enrolled on the Register or on the Provincial Medical Registers.

(2) and (3) of Section 5 to be omitted.

(4) is to be numbered sub-section (2) and will read as follows :—

"No persons may at the same time serve as a member in more than one capacity."

Incorporation of the Council.

Section 6. The Council so constituted shall be body corporate by the name of the Council of Medical Education and Registration for British India, having perpetual succession and a common seal, with power to acquire and hold property both moveable and inmoveable, and to contract, and shall by the said name sue and be sued.

Term of office.

Section 7. (1) Every member including the President, shall hold office for the term of five years from the date of his nomination or election as members. In the case of a vacancy arising in the Council, such vacancy shall be filled by the election or nomination as the case may be within 30 days of such vacancy occurring. A member or President so filling up a vacancy shall hold office up to the end of the term of the original member.

(2) No alteration.

Additions.

(3) Any member may at any time resign his appointment by letter addressed to the President of the Council.

(4) Upon the death or resignation of any member of the Council, some other person shall be appointed a member of the Council in his place by nomination or election, as the case may be, in accordance with the provisions of Section 3, and such person shall hold office for the remainder of the period for which the member in whose place he is appointed was nominated or elected.

(5) (*a*) Leave of absence from India may be granted by the Council to any member thereof for a period not exceeding six months.

(*b*) If any member of the Council leaves India without the leave of the Council, or does not return to India within the period of the leave granted by the Council, the Council may forthwith declare his seat vacant and such declaration shall have the same effect as resignation of his seat by the member concerned.

(*c*) In any case not provided for in clauses (*a*) and (*b*), if any member of the Council shall absent himself from three consecutive meetings of the Council, the Council may forthwith declare his seat vacant and such declaration shall have the same effect as resignation of his seat by the member concerned.

Meetings of the Council.

Section 8. (1) The Council shall hold its first meeting at such time and place as may be appointed by the Governor-General-in-Council and thereafter the Council shall meet at least once in each year and as often at such time and place and in such manner as may be provided for in the regulation framed for the purpose by the Council.

(2) No alteration.

Officers, Committees and servants of the Council.

Section 9.

(*a*) Add "A President and" before the word "Vice-President," and at the end, "but shall not be appointed as a Medical Inspector."

(*b*) No change.

(*c*) Add at the end "but shall not be appointed as a Medical Inspector or Visitor."

The Executive Committee.

Section 10. (1) The Executive Committee shall consist of, besides the President and Vice-President of the Council, seven members who shall be elected by the Council from amongst its members.

(2) and (3) No alteration.

(4) No business at any meeting of the Executive Committee shall be conducted unless at least five members are present.

Provincial Committees.

Section 11. (1) The Provincial Committee shall consist of the following members, *viz*.

(*a*) the Member of the Provincial Medical Council, wherever such a Council is constituted.

(*b*) the members of the Council elected by :

(1) each Indian University,

(2) the medical practitioners,

(3) the Licentiates, and

(4) the members nominated to the Council by the Governor-General-in-Council from the province, if any, under sub-clauses (*c*), (*d*) and (*e*) of Section 3 (1).

(2) The Registrar of a Provincial Medical Council shall be the Secretary of the Provincial Committee of the Council.

(3) No alteration.

The Registrar.

Section 12. No alteration.

Procedure for enrolment.

Section 13. (1) Omit the words "Secretary.....Regulations" from the 4th line to the end of the paragraph and omit the 1st proviso and after the words "made to" in the 4th line add the words "the Registrar".

After the word "Registrar" add "The applicant will mention in the application the name of the province in which he is residing and the Registrar shall dispose of it in accordance with the provisions of the Act and the Regulation and inform the Provincial Committee of such action".

Qualifications for enrolment.

Section 14. No alteration.

Addition.

(*a*) *Publication of the Register.* The Council shall in every year cause to be printed, published and sold a correct Register of the names in alphabetical order according to the surnames, with their respective residences and qualifications conferred by any medical institution or university with the dates thereof of all persons appearing on the Register as existing on the 1st day of January in every year, and such a Register shall be called the Indian Medical Register.

Erasure of names of persons guilty of improper conduct.

Section 15. (1) If it appears to a Provincial Committee of the Council that there is a reasonable ground to believe that any person enrolled on the Register and residing in the province for which such Committee is constituted has been convicted, either in His Majesty's possessions or elsewhere of a criminal offence implying a defect of character which unfits him to be a medical practitioner, or that he has been held guilty of infamous conduct in a professional respect, whether such offence or improper conduct has been committed before or after the enrolment of such persons or that he has been deprived of his recognised medical qualifications by the medical institution which granted them, the Committee may, after three months' notice served personally or sent by registered post to the last known address of such person, hear and consider the matter, and, if satisfied that such person has been so convicted, or has been held guilty of such improper conduct or has been so deprived shall either reprimand or suspend judgment or order erasure of the name of the person concerned, as the Committee may deem fit, and in the latter case, shall make a report to that effect to the Registrar General, who shall erase the name of such person from the Register :

Provided that—

(*i*) Same, except in line 9, substitute "Registrar General" for "Registrar."

Re-enrolment after erasure from the Register.

Section 16. No alteration.

Other amendments of the Register.

Section 17. No alteration.

Recognition of medical qualifications granted by medical institutions in India.

Section 18. (1) The medical qualifications granted by any statutory Indian University having a Medical Faculty which are included in the First Schedule shall be recognised medical qualifications for the purposes of this Act.

(2) A medical institution in India which grants medical qualification not included in the first Schedule may apply to the Secretary of the Provincial Committee in the province in which the institution is situated (and in a province where no such Committee is so framed, to the Registrar) who shall, after making such enquiries as the Provincial Committee, or in the case of the province with no Committee, as the Council, may direct, forward the same to the Registrar of the Council with the remarks of the Provincial Committee concerned. The Council, if it thinks fit, will recommend the recognition of the said medical institution to the Governor-General-in-Council and the Governor-General-in-Council may by notification in the Gazette of India amend the First Schedule so as to include such qualifications therein.

(3) No alteration.

Addition.

(4) In case of any university or medical institution not being recognised by the Council for any reason, an appeal shall lie to the Governor-General-in-Council.

Recognition of medical qualifications granted by medical institutions outside India.

Section 19. (1) The medical qualifications now granted by medical institutions in countries outside India shall be declared recognised medical qualifications under the Act, as soon as the Governor-General-in-Council is satisfied on the report of the Indian Medical Council that the registering authorities of such countries are prepared to enter into schemes of reciprocity, as regards enrolment and registration of medical practitioners, with the Indian Medical Council. A list of such medical qualifications shall, by notification in the Gazette of India, be included in the Second Schedule. Such notification may also direct that an entry shall be made in the Second Schedule, declaring that such be a recognised medical qualification only when granted after a specified date.

(2) No alteration.

(3) Omit this paragraph.

(4) to be re-numbered as (3) and will be as follows :

"The Governor-General-in-Council may, on the report of the Council, by notification in the Gazette of India, amend the Second Schedule so as to delete any medical qualification therefrom."

Addition.

(4) In the case of Indian students proceeding for medical education to a foreign country outside India before the establishment of the Indian Medical Council and obtaining a degree or diploma in that country, they may be enrolled in the Register even though the reciprocal arrangements mentioned in sub-section (2) may not exist with that country provided the qualification is obtained after examination, that would entitle the holder thereof to practise as a medical practitioner in that country in which it was obtained, and that it indicates a standard of professional education not lower than that prescribed by the Indian Medical Council for purposes of registration in the Indian Medical Register.

(New Section) Privileges of registered persons.

Section 20. Notwithstanding anything contained in any enactment, rule, regulation, bye-law, or order to the contrary :

(1) After the enactment of this Act, the expression 'legally qualified Medical Practitioners' or 'duly qualified Medical Practitioner' or any expression importing a person recognised

by law as a medical practitioner or member of the medical profession, shall when used in any Acts of the Central or Provincial Legislatures mean a medical practitioner registered under this Act, or the Provincial Medical Acts till further amended under Section of this Act.

(2) A registered practitioner shall be entitled to recover in due course of law any expenses or fees which he may be entitled.

(3) No certificate required by any Act, now in force or that may hereafter be passed, from any medical practitioner or medical officer shall be valid unless the person signing the same shall have been registered under this Act or under Provincial Medical Acts.

(4) After enactment of this Act, no person shall hold any appointment as a Physician, Surgeon, or other Medical Officer in the Civil, Military, Naval or Air Force Services in India or any Dispensary or Hospital or Lying-in-Hospital or Infirmary not supported entirely by voluntary contributions, or any public establishment, body or institution or as a Medical Officer of Health or as a Medical Officer in vessels plying in Indian waters, unless he be registered under this Act or the Provincial Medical Acts.

(5) Notwithstanding anything in any other Law for the time being in force, every person who shall be registered under this Act shall be exempt if he so desires from serving on all juries and inquests whatsoever.

Sections 20, 21, 22, 23, 24 and 25 to be re-numbered 21, 22, 23, 24, 25 and 26.

Power to require information as to courses of study and examinations.

Section 21. (New Section) (Section 20 of the Bill).

No alteration.

Inspection of Examinations.

Section 22. (New Section) (Section 21 of the Bill).

(1) Substitute "The Executive Committee" by "the Council" and add the words "and visitors" after the word "Inspector."

(2) Add the words "such examination" after the words "in regard to" in the sixth line of this clause.

(3) Delete the words "to the Governor-General-in-Council" in the last sentence of the clause and substitute "to the Council. The Council shall, after considering such reports, send them to the Governor-General-in-Council with its recommendation."

Withdrawal of recognition.

Section 23. (New Section) (Section 22 of the Bill).

(1) No alteration.

(2) In place of "Local Government of the province" substitute "Provincial Committee where one is established" and in the fifth line of this sub-section in place of "Local Government" the words "the Provincial Committee where one is established" be substituted and in the last line of the sub-section in place of "Local Government" the word "Committee" be substituted.

(3) In place of "Local Government" the words 'Provincial Committee where one is established" be substituted and in place of the words "Governor-General-in-Council" the following be substituted :

"The Council, then will forward to the Governor-General-in-Council its recommendations."

In sub-section (4) after the words "direct that" the following be inserted : "the medical qualification granted by the institution be not regarded as a recognised medical qualification and that." At the end of sub-section (4) the following be added "provided that the Governor-General-in-Council may on a further representation by the Council or on a representation from the institution revoke such direction."

Addition.

(5) During the continuance of such direction the institution to which it relates shall cease to have a representation (if any) on the Council.

Power to make regulations.

Section 24. (New Section) (Section 23 of the Bill).

Sub-section (1)—clause (*l* and (*m*) be added :—Clause (*l*). Mode of election under Section 3. sub-section (1), clauses (*b*), (*c*), (*d*) and (*e*).

Clause (*m*) providing for penalties to be enforced in cases of false representation of any kind made by an applicant for registration in the register.

Sub-section (*ii*) after the words "Governor-General-in-Council" add the following : "Provided that, no permanent appointment, or commitments shall be made by the Governor-General-in-Council."

Information to be furnished by Council and publication thereof.

Section 25. (New Section Section 24 of the Bill)

No alteration.

Commissions of Inquiry.

Section 26. (New Section) (Section 25 of the Bill).

(1) Whenever it is made to appear to the Governor-General-in-Council that the Council is not complying with any of the provisions of this Act, the Governor-General-in Council may notify the particulars of such alleged default to the Council, and if the Council fails to remedy such defaults within such time as may be fixed by the Governor-General-in-Council in this behalf the Governor-General-in-Council may for the purpose of remedying such default refer the particulars of the complaint to a Commission of Inquiry.....its opinion necessary.

(2) and (3). No alteration.

(New Section.)

Section 27. In consequence of the enactment of this Act and in consonance with its provisions, an All-India Provincial Medical Councils Consolidating Act shall be passed for the purpose of amending the existing Provincial Medical Acts and Standardisation of Provisions relating to Medical education and registration throughout India.

(New Section.)

Section 28. The Indian Medical Council shall cause to be published under their direction a book containing a list of medicines and compounds, and the manner of preparing them, together with the true weights and measures by which they are to be prepared and mixed, and containing such other matter and things relating thereto as the Council shall think fit, to be called "The Indian Pharmacopoeia" and the Council shall cause to be altered, amended, and re-published such Pharmacopoeia as often as they shall deem it necessary.

The First Schedule.

Add "Patna University, Andhra University and Rangoon University" in the first column and "Bachelor of Medicine" and "M. B." against each of the above universities and in the second and third columns respectively.

Add a Third Schedule.

The Third Schedule.

(See Section 18).

Recognised qualifications and certificates, other than those mentioned in the First and Second Schedules.

(1) Fellow, Member and Licentiate of the College of Physicians and Surgeons of Bombay.

Fellow, Member and Licentiate of the State Medical Faculty of Bengal.

Fellow, Member and Licentiate of the State Medical Faculty of the Punjab.

Licentiate and Apothecary of the Board of Examiners, Medical College, Madras.

Licentiate of the State Board of Medical Examinations, United Provinces.

Licentiate of the Behar and Orissa Medical Examination Board.

Licentiate of the Burma Medical Examination Board.

Licentiate of Central Provinces Medical Examination Board.

Licentiate of the Assam Medical Examination Board.

(2) Any person trained in a Government Medical College or School who holds a diploma or a certificate granted by Government declaring him to be qualified to practise Medicine, Surgery and Midwifery, or to be qualified for the duties of a Military Assistant Surgeon, Hospital Assistant or Sub-Assistant Surgeon; or any person who holdes a diploma or certificate to the same effect, granted by the King Edward Hospital Medical School at Indore, or the Medical School, Hyderabad (Deccan).

Current Medical Literature.

Intramuscular Injections of Quinine in Pneumonia.

ROOS.

Finska. Lakares. Handlingar, Oct. 31, p 778.

The author first traces the history of quinine treatment of pneumonia since 1899 and then records his own observations. Every other patient admitted into his hospital was treated with quinine, the alternate cases serving as controls.

	Total No.	No of deaths.	Patients over 50 yrs. of age.
Patients treated with Quinine ...	105	9	15%
Control cases ...	85	13	30%

The discrepancy of the age incidence in the two groups necessitated a fresh classification so that patients between the ages of 15 and 50 in both groups and only those in the quinine treated group whose treatment began before the 5th day of the disease were taken into consideration. The result of this observation is shown below.

	Total No.	Average age.	Deaths.
Patients treated with Quinine	56	28	2
Control cases ...	59	30	7

A remarkable difference in the clinical course was that in the quinine treated group, the temperature usually came down by lysis whereas in the control cases it came down by crisis. The average duration of fever was almost the same and complications were as common and there was no striking improvement in the general condition after the injections. The author is, however, of opinion that his experience serves to confirm the favourable reports of previous workers in the line.

The solution injected consisted of 2 parts of quinine hydrochlor, 1 part of urethane and 20 parts of distilled water. The usual dose was 5 c. cm. on the 1st, 2nd, 4th and 6th days of treatment. *A. N. G.*

Uremia Caused by Sodium Chloride Deficiency.

BORST.

Zeits. Fir. Klin. Med., June 22, 1931.

In recent years American and French authors have reported many cases of uremia in patients who had lost considerable amounts of salt by vomiting, diarrhoea, or diabetic acidosis. In these cases shortly after the administration of sodium chloride solutions the urea content of the blood serum descended to normal and large quantities of urea were eliminated. Following a review of the literature, BORST reports his own observations and investigations. In two patients in whom the urea content of the blood serum was enormously increased and who died shortly after their arrival at the clinic, necropsy revealed only slight changes in the renal parenchyma. One of the patients lost a considerable amount of fluid by vomiting and the other by diarrhoea. There was, however, no elimination of chlorides in the urine. The chloride content of the blood plasma in one was determined after sodium chloride solution had been administered, and it was still below normal. The elimination of the urea was investigated similarly and the injection of a hypertonic solution of sodium chloride increased it markedly.

Uremia as the result of sodium chloride deficiency is not at all a rare occurrence. It may also develop in different diseased conditions. When several causal factors concur, such as sodium chloride deficiency, loss of fluid and increased protein decomposition it is not uncommon to find the onset of uremia in patients with kidney function intact. *A. N. G.*

Experiences with Fever Therapy in Chronic Gonorrhoea.

FORESTER.

Munch. Med. Woch. June 5, 1931.

With his clinical experience FORESTER is in a position to draw the following conclusions:

Fever therapy should be instituted in all cases of gonorrhoea that are refractory to the usual therapeutic measures. Of the various fever treatments preference should be given to the maximal vaccine therapy and the treatment with a suspension of nonpathogenic micro-organisms. Failing these, malario-therapy may be tried, provided there are no contraindications and the heart action is carefully observed. The number of fever attacks should be at least ten, irrespective of the form of fever therapy employed. The local treatment should not under any circumstance be discontinued during the course of the fever, because this alone will effect the killing and removal of the gonococci that have been eliminated by the fever process. The fever treatment should be followed by an after treatment lasting for at least two or three weeks. The preparatory and after treatments may be ambulatory. It is desirable that the treatment should be instituted under careful supervision. *A. N. G.*

Case of Pernicious Anaemia treated by injection of a Liver Extract.

ANDERSON.

Lancet. Nov. 7, 1931. pp. 1022.

Satisfactory results after the administration of Hepatex (P. A. F.) are said to have been obtained by the writer of this note in a man aged 71 suffering from pernicious anaemia. The patient had to follow a rigid dietary as a minor deviation *e. g.* a smoke or a drink which he ordinarily abstained from, would result in an upset of the digestive functions. The disease was presumably well-established before he called in medical aid for it was noticed by his friends that he looked pale for the past two years. When examined he was found to be suffering from mild nephritis with some bronchial trouble which yielded to treatment but the pallor became more pronounced with lemon tint. He was put on liver and a little later hog's stomach extract, glycerin of pepsin, and hydrochloric acid after a blood count which was as follows :

R. B. C.	1,545,000	Polymorphs	38%
W. B. C.	2,000	Lymphocytes	50%
Haemoglobin	40%	Large mononulears	12%
Colour Index	1·3		

Eve's halometer, 42, no megaloblasts, but four normoblasts seen. Marked anisocytosis, moderate poikilocytosis, very occasional polychromasia.

A month afterwards the red cells had fallen to 1,140,000 and the haemoglobin to 25%. The temperature was 100 to 101·F, and the pulse rate 110 to 140. The patient had tried to persevere with expressed liver juice, together with orange or lemon juice but had to discontinue it because of nausea.

About six weeks after the second blood report treatment by Hepatex P. A. F. began and the author reports that after three weeks' daily injections of 5 c. cm (equal to 100 g fresh liver) he was a different man. The first two injections were intravenous at an interval of 4 days but later they were intramuscular. A favourable response was noted even after the first injection. After the second injection the pulse rate fell to 90 and the condition of his heart improved and sounds became normal and the patient gradually improved ever afterwards. The patient was able to get about after 3 months' treatment. *S. K. S.*

Angina Pectoris.

LIAN.

Revue Belge. des. Sc. Med. April, 1931.

The author reports that out of the thirty-six cases of angina pectoris that he had studied only five were complicated by left thoracobrachial neuralgia. He thinks that an angina pectoris is a syndrome in which the distressing sensation has the following five characteristics : (*a*) It may be sternal or precordial. (*b*) It can attack the adjacent regions, especially the left arm. (*c*) It is accompanied by anguish ; *i.e.* by a double sensation, a psychic sensation of fear, of impending death, and a thoracic sensation of weight, or constriction, and of swelling. (*d*) It manifests itself in the form of crises. (*e*) It is the expression of a lesion or a functional disturbance of the heart or the large vessels. An outline of the author's mode of treatment is given in course of which he includes glyceryl trinitrate, acetylsalicylic acid, acetphenetidin, amidopyrine and sodium salicylate ; subcutaneous injections of procaine hydrochloride, sodium iodide, oily solutions of benzyl salicylate and of camphor, and paravertebral injections of procaine hydrochloride. When anginal crises is present the method of choice in the treatment of the cervicothoracobrachial neuralgias consists in roentgen irradiation of the roots of the brachial plexus and also of the cardiac plexus. *A. N. G.*

Treatment of Gonorrhoeal Epididymitis.

GINSBURG.

Vrach. Gaz. April 15, 1931.

GINSBURG confined his selection to cases of epididymitis in studying the complications of gonorrhoea because : 1. Epididymitis is the most frequent complication of gonorrhoea ; it disables many otherwise healthy persons for months. 2. The results of treatmemt in epididymitis are much more favourable than in any other gonorrheal complication. The author draws his conclusions in the following terms : There is until now no specific mode of treating complications of gonorrhoea including gonorrhoeal epididymitis. The results of vaccine therapy, protein therapy and physical therapy do not show any uniformity. The combination of two or more therapeutic

factors, however, appear satisfactory. It is imperative to make a careful study of the general condition of the patient, *viz.*, regulation of the bowels, prevention of erections, absolute physical and mental rest as well as simultaneous treatment of associated chronic infections and intoxications and last but not the least is a thorough local treatment. *A. N. G.*

Injuries of the Rectum by Thermometers.

Lancet Oct. 3, 1931. pp. 764.

DR. SIEBNER of Stuttgart reports six cases in which the wall of the rectum has been damaged by insertion of thermometers. The accidents are usually caused by the patients themselves, who take their temperatures because they are worried about illness. Soon after introduction of the thermometer there is tenesmus with haemorrhage. The injury is always on the anterior wall, some 5 c. m. above the anus.

S. K. S.

A "Contraceptive".

B. M. J. January 2, 1932. pp. 13.

GREEN-ARMYTAGE of Calcutta reports a case in which the implantation of a full size GRAFENBERG ring into the uterus of a woman by a London physician with a view to prevent conception proved futile. During the months following the insertion the patient suffered from irregularities, menorrhagia and backache with mastitis during her periods. About six months after the insertion no periods were seen and there was constant low fever with much rightsided pain in the abdomen. There was no vomiting but a constant brown discharge. There was no suspicion of pregnancy until the symptoms increased (especially the fever and pain) necessitating a thorough examination when she was found to be nine to ten weeks pregnant. The diagnosis of the writer was confirmed by a radiogram. On emptying the uterus which was considered advisable the ring was found embedded in the chorion, presumably responsible for the pain, discharge and fever. The writer observes that whether pregnancy to full term without disability to the mother or the foetus could occur in this case is a matter of speculation but such examples should serve as an eye-opener to advocates of birth control who are sometimes too much confident of their methods. *S. K. S.*

Consecutive Autopsies of Unusual Interest.

MORRIS.

Lancet. Vol. ccxxi. No. 5640, Oct. 3, 1931.

MORRIS reports a case of spontaneous rupture of the aorta from a series of interesting post-mortem examinations that he had to perform on two successive days. The case in a nutshell is :

A man aged 49 complained of sudden severe pain in the left side of the chest and down the spine. The pain started at midday and he had thereafter nausea. He was admitted to hospital at 11 P. M. the same night and found to have dyspnoea on exertion.

On examination : Apex beat just inside the nipple line. A harsh systolic and a diastolic (to and fro) murmur at the base ; an apical systolic and a faint murmur between the second and first beats. Blood pressure 97/60.

Previous history of epilepsy for many years. W. R. Negative.

The patient still had dyspnoea next day and in the early hours of the following morning he died in his sleep.

Post-mortem : A pint of blood in the pericardium and much extravasation round the base of the aorta and the pulmonary artery. A transverse tear through the base of the aorta on the posterior surface about half an inch above the cusps of the valves. The tear was linear and involved only the tunica intima and media. The adventitia was stripped cleanly from the media by blood, as in a dissecting aneurysm. The blood had spread up and down between the two outer coats. A small rupture at the lower part of the artery through the adventitia and pericardium, through which the blood had leaked into the pericardial cavity. Macroscopically the aorta appeared singularly free from disease apart from a few atheromatous patches with very mild puckering.

Histological examination : atheromatous changes and an attempt by the blood in one place to split the muscular coats. Coronary arteries patent and healthy. Heart nuscle good and heart of normal size.

The writer concludes by quoting the opinions of medical authorities regarding the rarity of occurrences of this nature. *S. K. S.*

Bacteriophage and Enforced Dissociation :

P. HADLAY and A. B. JIMENEZ.

J. Infect. Dis., 418 : 176, 1931.

A pure 'S', culture of B. paratyphosus A was dissociated in 10% homologus serum broth. Six transfers at 48 hrs. intervals gave 'R' colonies. The rough colony was grown in 30 cc. amounts of broth over night, filtered through a Berkefeld N. filter and tested against the 'S' type for bacteriophage. The third filtrate yielded a phage. To overcome the objection that the blood of the rabbit immunised against the 'S' type contained bacteriophage, a second experiment was tried. An 'S' culture was grown in 30 cc. of 7·8 beef infusion broth for 24 hrs. at 37·C. and then was allowed to stand at the room temperature for four ond half months. At this time plating showed only 'R' colonies. With this culture the first filtrate revealed numerous lytic areas and a strong bacteriophage was built up. To test for the presence of phage in the original old culture,

1c.c. of the old culture was added to 30 c.c. of broth and filtered. No lysis was observable on the plates. The view that bacteriophage is merely one aspect of the larger problem of microbic dissociation is discussed. *A. K. S.*

Lysozyme in the Development of the Intestinal Flora of the Newborn Infant.

L. ROSENTHAL and H. LIEBERMAN.

J. Inf. Dis., 48 : 226, 1931.

The rapid disappearance of the initial adventitious flora from the stools of nurslings is due to the action of lysozyme. The following facts sustain this hypothesis : Bacteria of the air are especially sensitive to the action of lysozyme. Human milk in contra-distinction to cow's milk contains lysozyme. Lysozyme introduced with food passes through the intestinal canal and appears in the stool. The period of rapid destruction of air borne bacteria in the intestines of infants coincides with the period in which lysozyme begins to appear in detectable quantity in the stools. Lysozyme is not found in the stools of infants fed on cow's milk, who do not get it in their food supply and rapid destruction of air-borne invaders does not occur in these infants. We may also assume that lysozyme which persists during the entire period of breast feeding, continues to protect the intestines from invasion by bacteria of the air. Also, lysozyme inhibits the growth of B. coli and apparently does not affect B. bifidus. Lysozymes may play a role in the stabilization of the intestinal flora of nursling by eliminating B. coli. *A. K. S.*

Variations and Type Specificity in the Species Haemophilus Influenzae.

M. PITTMAN.

J. Exper. Med. 53:471. 1931.

Strains of Influenza bacilli are of two kinds which have been called 'S' and 'R'. The 'S' strains are distinguished by the appearance of their colonies, which have a smooth surface, are of large size, show opaqueness and take on iridescence in oblique transmitted lights by the fact that the individual bacteria are capsulated and by the fact that they produce a soluble specific substance which is present in culture filtrates and in washings of the bacteria. 'R' strain forms colonies that are rough and irregular in outline, are less opaque than 'S' colonies, are of smaller size and are not iridescent. The individual bacterium possesses no capsule and these strains produce no soluble specific substance. The 'S' strains are also more pathogenic for animals than the 'R' strains. By means of cross precipitation reaction it has been possible to divide the fifteen 'S' strains studied into two distinct immunologic types. The same specific types are shown by means of agglutination reactions carried out at a temperature of 37°C.

Spontaneous conversion of 'S' into 'R' strains occurs in artificial culture media with great readiness. This may be delayed by certain cultural procedures and may be hastened by growth in mediums containing type specific antisera. Artificial conversion of 'R' into 'S' strains has been observed, but the changes are carried out only with great difficulty. *A. K. S.*

Scientific Proceedings of the Thirty-First annual Meeting of the American Association of Pathologists and Bacteriologists.

Cleveland, Ohio. April 2 & 3 1931.

Bacterial pleomorphism : The derivation of non-virulent staphylococcus albus from virulent staphylococcus aureus.—MAX PINNER.

The relation between stapylococcus aureus and staphylococcus albus is essentially the same as that between 'S' and 'R' strains of other bacterial species.

1. S. albus splits off spontaneously from pure live strains of S. aureus.

2. This splitting off can be hastened and increased by culturing S. aureus in serum containing aureus agglutinins.

3. From S. albus strains, S. aureus colonies can be isolated by culturing albus in anti-albus serum.

4. The following differences have been established between S. aureus and S. albus.

   (*a*) Aureus is virulent for rabbits, whereas albus is not.

   (*b*) The two strains produce strain specific agglutinins, which are specifically absorbed by the homologous strains.

   (*c*) Aureus is an active proteolyzer ; albus is not.

   (*d*) Aureus coagulates citrated blood plasma ; albus does not.

   (*e*) Aureus produces haemolysin ; albus does not.

   (*f*) Aureus produces a higher degree of alkalinity in beef broth infusion than does albus.

5. Rabbits can be rendered completely immune against aureus by injecting them with living albus.

6. Whereas pigment production, virulence and agglutinability go strictly parallel and are therefore dependent on environmental conditions, it was found that the susceptibility to phage remains the same for each strain—regardless of its dissociative changes.

7. It is of interest to point out that in staphylococci the phenomena of dissociation does not involve the usual change in colonial morphology smooth and rough but an alteration of pigment production *A.K.S.*